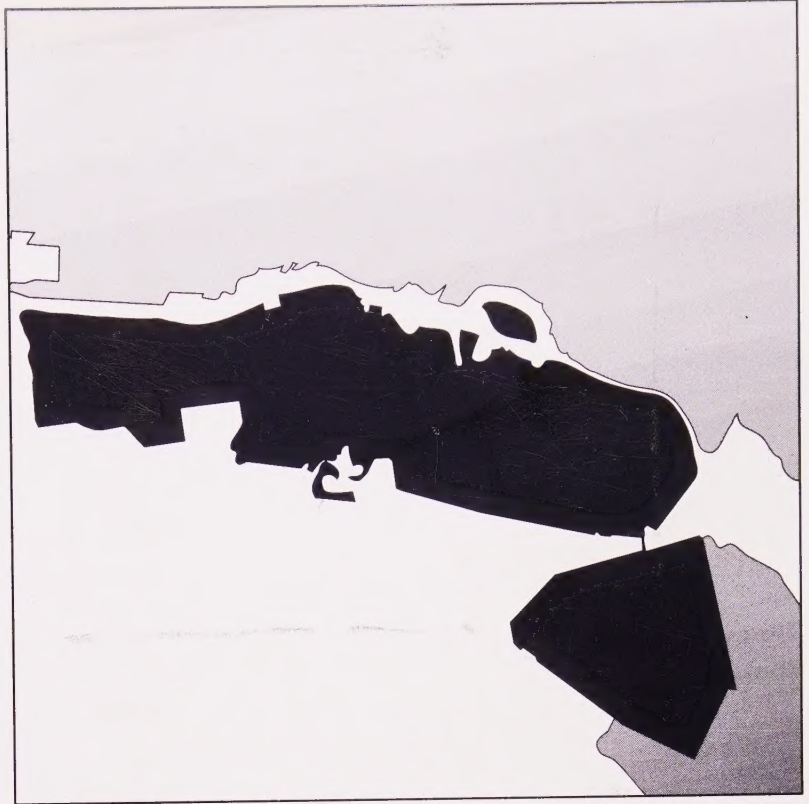


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City of Alameda

***General
Plan***

February, 1991



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CITY OF ALAMEDA

GENERAL PLAN

Adopted by the City Council
February 5, 1991

Prepared by

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CITY OF ALAMEDA

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City of Alameda

General Plan

1 Setting and Organization of the General Plan

1 SETTING AND ORGANIZATION OF THE GENERAL PLAN

The General Plan establishes the City of Alameda's development policies for the period 1990-2010. Its purpose is to guide residents, businesses, policymakers and elected officials in making choices about public and private activities that shape the City's physical environment.

The General Plan as an expression of community values serves as a marker, both for where the community finds itself today and where it hopes to be in the future.

1.1 A CAPSULE HISTORY OF ALAMEDA

Alameda in its natural state was a peninsula covered by a dense forest of coastal live oak. Prior to the arrival of the Spanish and Mexicans it was inhabited by Coastal Miwoks who sustained themselves through hunting, fishing and gathering. Settlement by non-natives began in 1776 after Luis Peralta divided part of his large East Bay land grant, the Rancho San Antonio, among his four sons. Alameda derived its original name, "the Encinal," from the large stands of native oaks ("encino" means "oak" in Spanish) on the Main Island. The name "Alameda," meaning "grove of poplar trees," was given to the City as a poetic gesture upon popular vote in 1853.

In 1849, the California Gold Rush brought Americans and Northern Europeans to San Francisco Bay. Many made their fortunes in supplying goods and services to the region's burgeoning population. Among these were two young entrepreneurs, William Worthington Chipman and Gideon Aughinbaugh, who purchased the Encinal from Antonio Maria Peralta for \$14,000 in 1851, the year after California became a state. They subdivided the land and sold tracts for residences and orchards. By 1872, three separate settlements, the Town of Alameda, Encinal and adjacent lands, and Woodstock, were established in the east, central and western sections of the peninsula. The Town of Alameda was granted a charter by the State Legislature in 1854; incorporation of all peninsula settlements under one local government occurred in 1872.

Figure 1-1 Alameda Rail Transportation, 1887

Source: *Alameda: A Geographical History*, Imelda Merlin



Early growth of residential, commercial and industrial areas depended upon water and rail transportation, and an excellent climate. (See Figure 1-1, Alameda Rail Transportation, 1887) The City's industrial waterfront and small commercial districts ("the stations") developed in conjunction with rail improvements, while neighborhoods of Victorian homes were built, and beach resorts attracted tens of thousands of weekend visitors. In 1902, the Tidal Canal was completed and Alameda became an island. Major shipyards and Neptune Beach (the "Coney Island of the West") were established along the northern and southern shores to take advantage of the island's assets.

The decades between 1920 and 1970 witnessed cycles of boom and bust. Following an enlightened era of civic building during the 1920s, Alameda endured difficult years of political scandal and corruption through the 1930s. The entry of the United States into World War II focussed the City's attention on the war effort. During World War II, shifts ran around the clock at the Naval Air Station (commissioned in 1940) and in the City's shipyards, and the City's population reached an all-time high of 89,000.

By 1973 concern about replacement of Victorian homes by boxy apartment buildings and the prospect of all-apartment development on Bay Farm Island led to passage of initiative Measure A, which generally prohibits the building of residential structures having more than two units. Despite this restriction, an average of 300 homes per year were built between 1970 and 1990, mainly on Bay Farm Island. Bay Area growth pressure has facilitated redevelopment of unused shipyards on the Northern Waterfront as business park, homes, and marinas that make Alameda the yachting capital of Northern California. Approval of the last large residential project on Bay Farm Island in 1989, plus senior housing under construction and Navy housing committed, will bring Alameda to 95 percent of residential holding capacity.

The only major committed nonresidential project is completion of Harbor Bay Business Park on Bay Farm Island, which will add space for one-third as many jobs as exist in Alameda in 1990. Entering the '90s, Alameda's greatest unknown is the effect of impending defense budget cuts on the future of the Alameda Naval Air Station (NAS), which occupies one-quarter of the City's land area and is its largest employer.

1.2 THEMES OF THE GENERAL PLAN

The General Plan's policies reinforce five broad themes:

An island: Arriving in Alameda is an event -- a journey across or through the water that clearly establishes the City's boundaries and identity. General Plan policies strengthen awareness of the City's island setting by making the shoreline more visible and accessible.

Small town feeling: Alameda has always been a quiet, friendly, predominantly residential community, an ideal urban/suburban community created in an era when commutes were by rail or ferry. The City does not have or want tall buildings, freeways, highway commercial strips, or vast tracts of look-alike housing. Measure A, the 1973 initiative that was passed to prevent Alameda from becoming predominantly a city of apartment buildings, stands as a clear rejection of the change that seemed at the time to be engulfing the City.

Respect for history: The City's rich and diverse residential, commercial, industrial, and institutional architecture is continually gaining recognition as an irreplaceable asset. The Bay Area has no similar communities and none will be built. The General Plan emphasizes restoration and preservation as essential to Alameda's economic and cultural environment.

De-emphasis of the automobile: In a city where almost every street is a residential street, it is not surprising that increased traffic is seen as a major threat to the quality of life. The General Plan commits Alameda to vigorous support of transit improvements, ferry service, reduction of peak-hour use of single-occupant vehicles, and an enjoyable pedestrian environment.

Multi-use development on the Northern Waterfront: Retention of seaports and related industries, priority space for boating-related activities, and extension of an existing residential neighborhood to a new 10-acre park along the Estuary are the Plan's boldest policies for both preservation and change.

1.3 THE PLANNING PROCESS

NEED FOR REVISION OF THE 1979 COMBINED LAND USE PLAN (CLUP)

The City's 1979 CLUP is a 270-page volume crammed with detailed information and proposals. It includes three of the seven General Plan Elements mandated in 1990 by the State: Land Use, Open Space, and Circulation. Separately prepared and adopted elements are the Conservation Element (1973), Safety (including Seismic Safety) Element (1976), Noise Element (1976), Scenic Highways Element (1976, now optional), Energy Element (1979, optional), Historic Preservation Element (1980, optional), and Housing Element (1990).

CLUP policies were based on a 1975 Community Goals Study prepared by a committee of 600 citizens. Some of the CLUP's key proposals call for Zoning Ordinance amendments that, as of 1990, have not been implemented. Many CLUP policies are reaffirmed by this General Plan -- the major policy changes involve the Northern Waterfront. The CLUP, other Plan elements, and the Strategic Plan adopted by the City Council in 1989 have been valuable resources for General Plan revision.

PUBLIC PARTICIPATION IN PLAN-MAKING

Work on plan revision began in late 1988, and three community workshops were held in February 1989 (East End, West End, Bay Farm Island) to identify planning issues facing Alameda. More than 150 issues or ideas were offered by 100 workshop participants -- some of whom attended all three sessions. A list of planning options (choices) was prepared for review by the City Council and Planning Board, and a Working Paper (*Existing Conditions, Issues and Options*) analyzing the options selected by the City Council for study was published in June 1989.

At a second round of four community workshops in July and August a professional facilitator aided clear communication, and participants used an electronic voting machine to register their anonymous opinion of each option. Following review of the Working Paper and summaries of the workshops, the City Council discussed the options and requested further study of Northern Waterfront alternatives. In March 1990, after hearing public comment and considering Planning Board recommendations made at the close of two hearings, the City Council gave direction to the planning consultants for preparation of the Draft General Plan.

Council decisions were on major issues such as new access routes to Alameda, the future of housing in areas that have long been zoned for commercial use, and underused land on the Northern Waterfront. The purpose of the Draft General Plan was to enable a constructive community debate on Alameda's future. There were policies in the Draft that the Planning Board and City Council had not discussed. Revisions and additions were expected and were made as the Planning Board and City Council held public hearings prior to adoption of the revised General Plan.

1.4 NATURE AND SCOPE OF THE GENERAL PLAN

A city's General Plan has been described as its development constitution -- the set of policies within which development regulations and decisions must fit. The General Plan is a statement of the community's vision of its long-term or ultimate physical form and, desirably, a guarantee of stable development policies.

State Law requires each city and county to adopt and maintain a General Plan. Actions relating to zoning, subdivision approval, housing allocations, and capital improvements must be consistent with the General Plan.

The Alameda General Plan is not simply a compendium of ideas, data and wishes: it consists of a diagram (a drawing that shows arrangement and relations) and carefully worded policies, accompanied by explanations needed to make the reasons for the policies clear. The Plan has three purposes:

- o To enable the Planning Board and City Council to reach agreement on long-range development policies;
- o To provide a basis for judging whether specific private development proposals and public projects are in harmony with policies; and

- o To allow city departments, other public agencies and private developers to design projects that are consistent with City policies, or to seek changes in those policies through the process of amending the General Plan.

The Alameda General Plan must also be:

- o **Long-range:** However imperfect our vision of the future is, almost any development decision has effects lasting more than 20 years. The Alameda General Plan anticipates that buildout will be approached within 20 years.
- o **Comprehensive:** It must coordinate all major components of the community's physical development. The relationship between land use intensity and traffic is most obvious.
- o **General:** Because it is long-range and comprehensive, the Plan must be general. The Plan's purpose is to serve as a framework for detailed public and private development proposals. It establishes requirements for additional planning studies where greater specificity is needed before the City can act on development proposals.

The General Plan is implemented by staff in making administrative decisions, the decisions of the Planning Board and City Council, and by the zoning and subdivision ordinances, specific plans, redevelopment plans and the City's capital improvement program.

The Zoning Ordinance includes detailed use classifications and standards. Several zoning districts may be consistent with a single General Plan land use classification, and boundaries of zoning districts may be similar to but not identical with General Plan designations. Zoning Map changes affecting the extent of a Neighborhood Business District, for example, will be based on detailed parcel-by-parcel study and may not match the General Plan boundary precisely.

USING THE GENERAL PLAN

The Plan text distinguishes adopted policies from information describing the reasons for a policy. *Guiding Policies* are the City's statements of its goals and philosophy. *Implementing Policies* represent commitment to consistent actions. *Implementing Policies* are as specific as is appropriate given the City's current level of knowledge and consensus on each

issue. Adopted policy statements are printed in roman type; explanatory material appears in italics and is not adopted.

The General Plan Diagram in the pocket at the rear of this volume depicts the desired ultimate land use and street network. The Diagram must be used in conjunction with the Plan text. The Land Use Classifications (See Section 2.2) explain the legend on the Diagram and specify density and intensity ranges for each category. A glossary defines technical terms.

To make the General Plan diagram readable, it is necessary to omit isolated use designations smaller than an acre. Places of religious assembly are not shown.

ORGANIZATION OF THE PLAN

California's General Plan Law is a product of the incremental nature of the legislative process. If literally followed, it creates confusion as to where some topics should be located and some duplication among the seven mandatory Plan elements. Fortunately, Government Code 65301(a) allows a city to reorganize the material as long as all topics are covered. The exception is the Housing Element, which is required by State guidelines to contain extensive data as well as policies focusing on housing production. Alameda adopted a Housing Element for the period 1988-1995 in December 1990.

The content of the remaining six state-mandated elements (land use, transportation, open space, conservation, safety and noise) appears in the sections of the Alameda General Plan as noted:

Land Use Element establishes land use classifications, sets densities and intensities for development, and creates a pattern of land uses (including open space) to meet space needs.

City Design Element (Optional) provides ideas and policies to enhance Alameda's design quality and maintain its strong visual image.

Transportation Element (formerly Circulation Element) contains policies for streets, transportation systems management, transit, pedestrian routes, bikeways, and movement of goods.

Open Space and Conservation Element (Open Space and Conservation Elements) includes policies for management of categories of open space lands and prescribes policies for conservation of both natural and cultural resources.

Parks and Recreation, Shoreline Access and Development, Schools and Cultural Facilities Element (Optional). These facilities are interrelated in Alameda so are treated in a separate element rather than included under Land Use or Open Space.

Airport Environs Element (Optional) contains policies that otherwise would appear under Land Use, Safety and Noise, but are grouped for convenient reference and to direct attention to the City's concern about airport impacts.

Health and Safety Element (Safety and Noise Elements) considers strategies to cope with the management of seismic, geologic, and soils hazards, fire and flooding, hazardous materials, and noise.

KEEPING THE GENERAL PLAN CURRENT

All public works projects and subdivision map approvals must be consistent with the General Plan. From time to time, changes in policy as well as unforeseen opportunities or needs will require amendment of the General Plan. In an effort to prevent casual or automatic General Plan amendments, State law allows each mandatory element to be amended not more than four times per year, although there is no limit to the number of changes made during each amendment. Most requests are likely to be for map changes, but each must be screened to determine effects on text policies.

The entire Plan should be reviewed and updated at least every five years. State law requires the Housing Element to be updated on a five-year schedule, and specifies 1990 and 1995 as revision years.



City of Alameda

General Plan

2 Land Use Element

2 LAND USE ELEMENT

The Land Use Element is the core of the General Plan. It is composed of text, policies and a land use plan, called the General Plan Diagram, which designates the proposed general location, distribution, and extent of land uses. Land use classifications, shown as different patterns on the Diagram, specify a range for population density and building intensity for each type of designated land use.

2.1 LAND USE ISSUES

Much of Alameda's character is a result of a development pattern set during a transit-dominant period. Narrow residential lots and compact shopping districts create a city rather than a suburban feel. Concern about further intensive development that would increase traffic and destroy the small-city feel led to passage of Measure A in 1973, halting apartment construction; it also led to the height and density/intensity standards in this General Plan.

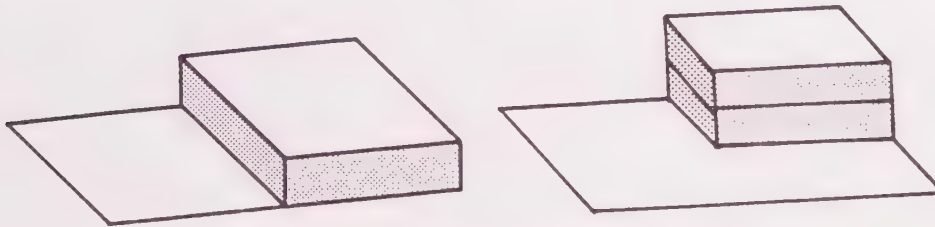
As in all cities, the demand for land that may be used for various purposes is continually changing, and is difficult to influence through planning policies. For example, the General Plan cannot preserve obsolete industry, but it can either express the City's desire to be a home to industry by retaining industrial land or encourage alternative uses by re-designating the land for other activities. Alameda's present zoning pattern was established in 1958, when commercial or industrial uses could outbid residential uses at most locations and portions of older residential neighborhoods were designated for conversion. In 1990 the prospect of significant assembly of residential properties for conversion to industry or retail use is remote, and dramatic changes are not anticipated.

The General Plan is designed to ease potential conflicts between different land uses such as manufacturing, industry and housing, having evaluated opportunities for preservation and development of those uses at specific locations. The Plan Diagram (located in the pocket at the back of this volume) designates some locations for preservation of industry and housing, and others for redevelopment of underused industrial land to increase the City's housing supply and limit potential traffic increases. Mixed-use areas are designated to encourage creative development and to retain and enhance the diversity that distinguishes Alameda from suburban cities.

2.2 LAND USE CLASSIFICATIONS

The following descriptions apply to uses indicated on the General Plan Diagram. The legend on the Plan Diagram includes an abbreviated version of the descriptions.

The classifications are adopted as General Plan policy and are intentionally broad enough to avoid duplication of the City's zoning regulations. More than one zoning district may be consistent with a single General Plan use category.



.5 FAR is equivalent to 1 story covering 50 percent of its site or 2 stories covering 25 percent of its site.

For most uses, a maximum permitted ratio of gross floor area to site area is specified. The floor area ratio (FAR) is a measure of building bulk that limits both visual prominence and traffic generated.

RESIDENTIAL

Because very little land subdivision is expected, residential densities are expressed in housing units per net acre, exclusive of land used or to be used for public or private streets. Where new streets will be needed, the land area to be occupied by streets is to be subtracted before calculating density or ratio of floor area to site area. Densities within the ranges listed below are used to calculate probable housing unit increases in Tables 2-1, 2-3 and 2-6. Densities used to estimate future additions do not establish entitlement to a specific number of housing units or amount of floor area.

Low-Density Residential: One family detached units. New units typically will be on 5,000-square-foot, or larger, lots, or in planned unit developments not to exceed 8.7 units per net acre. Density range: 4.5 to 8.7 units per net acre. Secondary dwelling units discussed in Section 65852.2 of the Government Code of the State of California are also permitted, and are not limited by this density range.

Medium-Density Residential: Two family or one family units. Medium-density residential development will provide at least 2,000 square feet of site area per unit. Existing multi family densities range up to 70 units per net acre on blocks with mixed one, two, and multi family units. Density range for additional units: 8.8 to 21.8 units per net acre. Projects of five or more units with 20 percent of the units affordable to lower-income households earn a state-mandated density bonus permitting up to 26.1 units per net acre. Congregate housing and single room occupancy facilities would be permitted and their density would be regulated by the bulk standards (setbacks, height, lot coverage) in each zoning classification.

Measure A Exception: The City Council agreed in the Settlement Agreement on the Guyton vs. City of Alameda case that Section 26-2 of the City Charter allows the Alameda Housing Authority to replace, with multi family housing, 325 low cost housing units. Three hundred twenty five represents the number of low cost units lost when the former Buena Vista Apartments were converted to the market rent Bridgeport Apartments. The City agreed that the 325 units of multi family housing can be built at densities allowed as of January 1, 1990, even if Zoning and General Plan changes are subsequently adopted which reduce allowable densities.

NEIGHBORHOOD BUSINESS

Compact neighborhood business districts, a majority of them at former streetcar stops, meet the convenience shopping needs of nearby residents. The area of new stores and offices is limited, and activities and business hours are controlled to maintain compatibility with residential neighborhoods. Residential use is encouraged on the second floor and is permitted elsewhere. Maximum FAR .6. The maximum FAR can increase to 2.0 if in-lieu parking fees are substituted for on-site parking.

COMMUNITY COMMERCIAL

This category includes the City's two major business districts, Park Street and Webster Street, and the four shopping centers: South Shore, Marina Village, Fernside, and Harbor Bay Landing. Uses include small retail stores, department stores, motels, automobile sales and service, and offices, depending on location. Attainable FAR depends on parking requirements and varies widely among shopping centers and traditional business districts. Residential and office uses are encouraged on the second floor and are permitted elsewhere. Maximum FAR with off-site parking is 3.0.

OFFICE

Professional and administrative offices not located in business districts or business parks: FAR .40 for one story; .45 for two stories. Medium-density residential is a permitted use.

BUSINESS PARK

Harbor Bay Business Park and portions of Marina Village consist primarily of offices, but also may include research and development space, manufacturing, and distribution. Harbor Bay plans include retail support uses and a conference-oriented hotel. Maximum FAR is .5, with increases up to a maximum of 2 permitted, proportional to the amount of required parking enclosed in a structure.

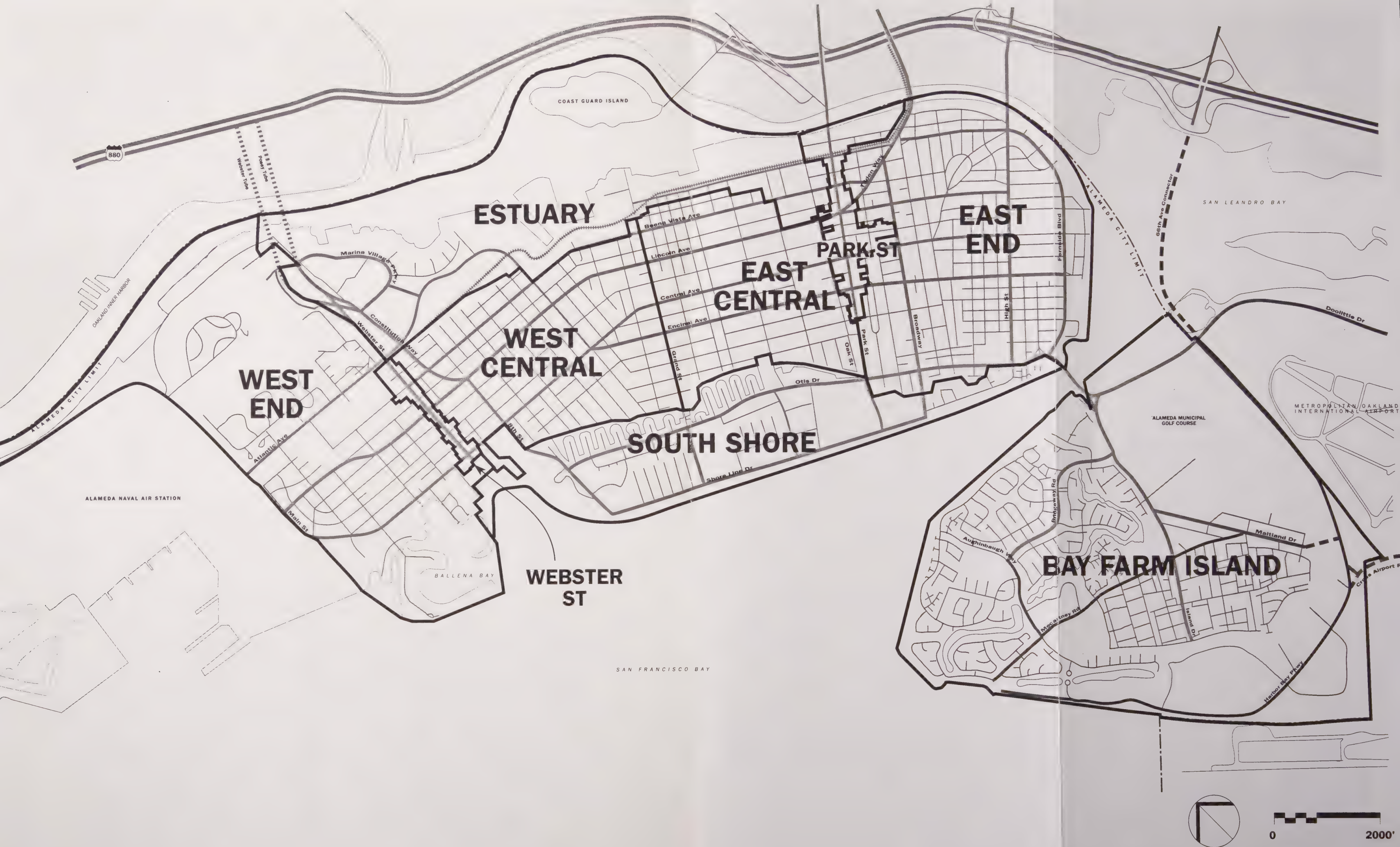
SPECIFIED MIXED USE

Five areas designated on the General Plan Diagram are to have combinations of uses specified to implement General Plan policies. Development programs that include limitations on development intensity are described in Section 2.6. (See Table 2-1.) The Specified Mixed Use Areas labeled on the General Plan Diagram are:

- MU1 Island Auto Movie
- MU2 Mariner Square
- MU3 Ballena Isle
- MU4 Northern Waterfront (Grand Street to Willow Street)
- MU5 Northern Waterfront (Willow Street to Oak Street)

GENERAL INDUSTRY

Alameda's heavy industries are related to bulk maritime and rail shipping or water transportation. Some may create noise, visual, or air-quality problems. Zoning regulations determine the types of activities to be permitted and the standards they must meet. Maximum FAR is .5.



City of Alameda - **Figure 2-1**
Planning Sectors

COMMERCIAL RECREATION

Marinas on the Estuary, San Leandro Channel, and San Francisco Bay berth the largest concentration of small boats in the Bay Area. Harbor Bay Isle Club provides 10 acres of indoor and outdoor recreational facilities for members, and a new R-V storage facility is proposed at the old gun club site on Maitland Drive.

PARKS AND PUBLIC OPEN SPACE/OPEN SPACE/HABITAT

In addition to City parks, these categories include the Alameda Municipal Golf Courses, Robert Crown Memorial State Beach, and public and private land committed or proposed as permanent open space for public access or habitat preservation.

PUBLIC/INSTITUTIONAL

Schools and City facilities that have unique public character are in this category. Places of religious assembly and private schools are not shown.

FEDERAL FACILITIES

Sites occupied by Federal facilities including Alameda Naval Air Station, Naval Supply Center, Naval Reserve Center, the Federal Center on McKay Avenue, and Coast Guard Island are in this category.

2.3 GENERAL PLAN HOLDING CAPACITY

The tables in this section show how Alameda will change if all potential development envisioned by the General Plan were to occur between 1990 and 2010. Tables 2-1 through 2-4 list assumptions for additional development by major land use categories. Table 2-5 summarizes these assumptions. Existing and projected development in the nine Planning Sectors illustrated in Figure 2-1 is shown in Table 2-6.

Population at buildout is estimated at 81,400 (vs. 74,139, January 1990 DOF), assuming household population averages 2.26 persons per housing unit and group-quarters population totals 5,000. The household size and vacancy rates used are those estimated by the California Department of Finance (DOF) for January 1990. The DOF 1990 estimate of group-quarters population, of which the largest component is Alameda Naval Air Station personnel, is assumed as constant. Housing unit totals in the tables do not include group quarters.

**TABLE 2-1
ASSUMED DEVELOPMENT INCREMENT:
SPECIFIED MIXED USE SITES, 1990-2010**

Site	Land Use	Units Or Square Feet
MU1 Island Auto Movie	Residential Office	150 Two Family ^a 15,000 sq. ft.
MU2 Mariner Square	Residential Office	10 Live/Work 5,000 sq. ft.
MU3 Ballena Isle	Hotel Office Commercial Recreation	220 rooms (234,000 sq. ft.) 70,000 sq. ft. 10,000 sq. ft.
MU4 Northern Waterfront (Grand to Willow)	Residential Office Industry	40 Live/Work 8,000 sq. ft. 100,000 sq. ft.
MU5 Northern Waterfront (Willow to Oak)	Residential Office Park	300 Two Family ^a 40,000 sq. ft. 10 acres

Notes: Section 2.6, Specified Mixed Use Areas, establishes minimum and maximum development shares for each use in each SMU area. This table assumes probable quantities for each permitted use within these ranges.

^aUp to 325 low cost housing units may be built in Alameda as multi family housing as replacement housing for the low cost units lost when the Buena Vista Apartments were converted to market-rate housing in 1988. Some or all of these replacement units may be located at one or more of the mixed-use sites, or in any area of the City where residential units are permitted.

**TABLE 2-2
ASSUMED DEVELOPMENT INCREMENT:
NONRESIDENTIAL PROJECTS, 1990-2010**

Site	Land Use	Square Footage
Alameda Gateway	Business Park Warehouse Retail	132,000 127,000 4,000
Marina Village	Office Retail	389,000 12,000
Paragon	Business Park	183,000
Harbor Bay BP	Business Park Retail/Hotel	3,545,000 540,000
Grand Marina	Office/Retail	42,000
Total		4,974,000

Note: Approved, entitled or submitted as of June 1990.

**TABLE 2-3
ASSUMED DEVELOPMENT INCREMENT
RESIDENTIAL PROJECTS, 1990-2010**

Site	Acres	Density	Type	Units
Alameda Annex (#1) (U. S. Navy)	59	MDR	Two Family	785 ^a
Independence Plaza (#2)	5	MDR	Multi Family	186
Atlantic/Buena Vista (#3-#6)	9	MDR	Two Family	205
Marina Village (#9)	7	MDR	Two Family	156
Beltline Yard (Near Webster Street)	4	MDR	Two Family	84
Main Island Infill	-	MDR	One Family, Two Family	520
Village 5/HBI (#7) (Bay Farm Island)	104	LDR	One Family, Two Family	630
Clarke Lane (#8) (Bay Farm Island)	3	MDR	One Family, Two Family	25
Grand Harbor (Live aboard)	-			38
Specified Mixed Use Sites (See Table 2-1.)	-	MDR	Two Family Live/Work	500
Total				3,129

Notes: ^a520 dwelling units are expected through 1995.

Site numbers (#) from Housing Element, adopted December 1990.

Up to 325 low cost housing units may be built in Alameda as multi family housing as replacement housing for the low cost units lost when the Buena Vista Apartments were converted to market-rate housing in 1988. Some or all of these replacement units may be located at one or more of the mixed-use sites, or in any area of the City where residential units are permitted.

Source: Housing Element, adopted 1990; Blayney Dyett Greenberg, 1990.

**TABLE 2-4
ASSUMED DEVELOPMENT INCREMENT
COMMERCIAL, OFFICE, INDUSTRIAL DISTRICTS, 1990-2010**

Site	Land Use	Square Footage (Gross leasable area)
Park Street	Commercial	100,000
Webster Street	Commercial	100,000
Neighborhood Business Districts	Commercial	25,000
Subtotal	Commercial/Retail	225,000
Offices near Civic Center	Office	25,000
Encinal Terminals	Seaport	200,000
Total		450,000

Notes: Does not include projects from Table 2-2.

Gross leasable areas are estimates and are not based on availability of specific sites or construction at specific floor area ratios.

Supportable incremental retail space data and assumptions are:

- o All calculations are in 1988-1989 constant dollars.
- o 1988-1989 taxable sales: \$228,735,000 (excludes building materials, automotive, service stations).
- o 1990 jobs: 38,720 at \$800 per year sales in Alameda.
- o 1988-1989 sales to household residents: Total sales less sales to jobholders, plus \$1,000 nontaxable sales per capita = \$ 3,860 per household resident.
- o Buildout increment:

3,129 additional households x 2.26 persons x \$3,860	= \$27,296,000
18,600 additional jobs x \$800	= <u>\$14,880,000</u>
Total:	\$42,176,000

Supports 211,000 square feet at \$200 annual sales per square foot.

TABLE 2-5
SUMMARY OF ASSUMED DEVELOPMENT INCREMENT TABLES
1990-2010

Site/District	Housing Units	Non-Residential Square Footage
Specified Mixed Use Sites (Table 2-1)	500	482,000
Non-Residential Projects (Table 2-2)	0	4,974,000
Residential Projects (Table 2-3)	2,629 ^a	0
Commercial, Office, Industrial Districts (Table 2-4)	0	450,000
Total	3,129	5,906,000

^a2,629 represents assumed development increment from residential projects exclusive of the 500 Specified Mixed Use Sites identified above. The total in Table 2-3 (3,129) represents 2,629 plus 500.

**TABLE 2-6
LAND USE BY PLANNING SECTOR
1989-1990 AND BUILDOUT (2010)**

Planning Sector and Land Use	<u>Housing Units/Gross Square Feet</u>	
	1989-1990	Buildout
West End		
One Family Housing	1,405 units	2,455 units
Two Family Housing	4,180 units	4,180 units
Total Housing	5,585 units	6,635 units
Commercial	10,000 sq.ft.	328,000 sq.ft.
Business Park	0	132,000 sq.ft.
Webster Street		
One Family Housing	5 units	10 units
Two Family Housing	0	0
Total Housing	5 units	10 units
Commercial	349,000 sq.ft.	449,000 sq.ft.
West Central		
One Family Housing	1,833 units	2,023 units
Two Family Housing	2,809 units	2,809 units
Total Housing	4,642 units	4,832 units
Commercial	102,000 sq.ft.	140,000 sq.ft.
East Central		
One Family Housing	1,533 units	1,748 units
Two Family Housing	3,555 units	3,555 units
Total Housing	5,088 units	5,303 units
Commercial	38,000 sq.ft.	50,000 sq.ft.
Park Street		
One Family Housing	6 units	11 units
Two Family Housing	229 units	229 units
Total Housing	235 units	240 units
Commercial	945,000 sq.ft.	1,045,000 sq.ft.
East End		
One Family Housing	3,805 units	3,845 units
Two Family Housing	1,852 units	1,852 units
Total Housing	5,657 units	5,697 units
Commercial	54,000 sq.ft.	54,000 sq.ft.

Continued

Table 2-6, *Continued*

Planning Sector and Land Use	Housing Units/Gross Square Feet	
	1989-1990	Buildout
South Shore		
One Family Housing	1,395 units	1,400 units
Two Family Housing	2,658 units	2,658 units
Total Housing	4,053 units	4,058 units
Commercial	550,000 sq.ft.	550,000 sq.ft.
Estuary		
One Family Housing	342 units	1,120 units
Two Family Housing	369 units	555 units
Total Housing	711 units	1,675 units
Commercial	125,000 sq.ft.	137,000 sq.ft.
Business Park	876,000 sq.ft.	1,558,000 sq.ft.
Bay Farm Island		
One Family Housing	4,539 units	5,194 units
Two Family Housing	52 units	52 units
Total Housing	4,591 units	5,246 units
Commercial	64,000 sq.ft.	64,000 sq.ft.
Business Park	1,135,000 sq.ft.	5,220,000 sq.ft.
Total		
One Family Housing	14,863 units	17,481 units ^a
Two Family Housing	15,704 units	16,215 units ^a
Total Housing	30,567 units	33,696 units
Commercial	2,237,000 sq.ft.	2,817,000 sq.ft.
Business Park	2,011,000 sq.ft.	6,910,000 sq.ft.

Notes: Commercial includes retailing, services and business and professional offices with the exception of Harbor Bay Business Park where the support retail is included under Business Park. This table does not include manufacturing, distribution, and office space in general and light industrial areas.

^aUp to 325 low cost housing units may be built in Alameda as multi family housing as replacement housing for the low cost units lost when the Buena Vista Apartments were converted to market-rate housing in 1988. Some or all of these replacement units may be located at one or more of the mixed-use sites, or in any area of the City where residential units are permitted.

ABAG (*Projections '90*) expects the number of jobs in Alameda to increase from 38,700 estimated in 1990 to 47,700 in 2005, a gain of 9,000 jobs in 15 years. If buildout and full occupancy of the nonresidential space summarized in Table 2-2 and Table 2-4 were to be reached by 2010, Alameda would add 18,600 jobs. The ABAG projection includes an unstated assumption about employment at Alameda NAS. The estimate of total future employment included in the General Plan is based on an assumption that the number of jobs in space available in 1990 will remain constant, and that job growth will result from increases in nonresidential space. Because most of the space will be business park/office, the average density will be one employee per 300 square feet of gross floor area.

Recognizing the transportation impacts that can result from a land use pattern that prevents many workers from living near their work, state law requires cities and counties to zone sufficient land for residential use in relation to nonresidential use. Jobs/housing balance is often quantified by comparing the number of employed residents in a community with the number of jobs available in the same community. Balance tends to minimize travel, although if local employees cannot afford or do not desire local housing, there may be long commutes for many residents and employees.

ABAG estimates that in 1990 the ratio of Alameda jobs to employed residents of Alameda is .95 (38,720 jobs; 40,800 employed residents). Assuming the same 52.6 percent of residents will hold jobs at buildout, the ratio will jump to 1.34 (57,300 jobs; 42,850 employed residents). The bulk of the employment gain (74 percent) will result from buildout of Harbor Bay Business Park under entitlements that pre-date revision of the General Plan. Without Harbor Bay Business Park, the jobs buildout would drop, yielding a jobs-to-employed-residents ratio approaching 1:1.

2.4 RESIDENTIAL AREAS

Alameda is primarily a residential community; 71 percent of employed residents commute to jobs outside the city. All streets on the Main Island except Webster Street are at least partly residential streets. Central location in the region, a good climate, and the sense of identity provided by surrounding water have kept residential demand strong.

This section should be read in conjunction with the Housing Element, adopted in 1990 and published separately, which addresses housing need and includes a five-year program to preserve and increase the supply of housing.

Guiding Policies: Residential Areas

- 2.4.a Maintain and enhance the residential environment of Alameda's neighborhoods.
- 2.4.b To the extent feasible, conserve housing located in areas that have been zoned for commercial or industrial use.
- 2.4.c Where a suitable residential environment can be created, give priority to housing on land to be developed or redeveloped in order to meet the quantified objectives of the Housing Element.
- 2.4.d Limit residential development to one family and two family dwellings, in accord with the provisions of Measure A. Up to 325 low cost units may be built in Alameda as multi family housing as replacement housing for the low cost units lost when the Buena Vista Apartments were converted to market-rate housing in 1988. Some or all of these replacement units may be located at one or more of the mixed-use sites, or in any area of the City where residential units are permitted.

Although no apartments other than replacement units have been approved in Alameda since passage of initiative Measure A in 1973, in 1990 less than half of all existing units are one family dwellings.

- 2.4.e Expand housing opportunities for households in all income groups.

See Housing Element Policies B.1 (Section 8 Rental Assistance) and C.1 (Affordable Housing Program Ordinance).



Age, size, and style variety creates interesting neighborhoods.

- 2.4.f Protect and restore Alameda's outstanding residential architecture of all periods and styles.

See also City Design Element, Section 3.3, Architectural Resources.

- 2.4.g Minimize through-traffic on minor residential streets.

See policies 4.1.a and 4.1.i.

- 2.4.h Control nonresidential development on sites adjoining residential neighborhoods to minimize nuisances.

Implementing Policies: Residential Areas

- 2.4.i Schedule hearings to consider amendments to the Zoning Map that would reclassify predominantly residential areas zoned for nonresidential use to bring the Zoning Map into consistency with the General Plan Diagram.

- 2.4.j Include a specified minimum number of residential units in appropriate Specified Mixed Use areas.

This policy ensures that housing will be included in mixed-use development proposals. Other uses also could be required or some Specified Mixed Use areas could be developed exclusively for housing at the discretion of the developer. See Section 2.6.



Lagoon at Otis Drive

- 2.4.k Explore the possibility of developing a small portion of the Alameda Beltline railyard near Webster Street into a residential neighborhood.

Development here could only occur after negotiations with the owner. Housing would relate to proposed greenway and Island Auto Movie site. See policies 2.6.a and 6.1.g

- 2.4.l Preserve historic districts and buildings of architectural significance.
- See policies 3.3.a and 3.3.b in City Design Element, policy 5.6.a in Open Space and Conservation Element, and the 1980 Historic Preservation Element.*
- 2.4.m Give priority for public open space and other public improvements to neighborhoods determined to have a shortage relative to the rest of the city.
- 2.4.n Explore the feasibility of providing definitions and identifying appropriate locations for congregate housing and single room occupancy (SRO) hotels as part of the comprehensive revision of the Zoning Ordinance.
- 2.4.o Amend the Zoning Ordinance and zoning map to be consistent with Measure A, as necessary.

2.5 RETAIL BUSINESS AND SERVICES

Convenient and pleasant shopping is important to residents. Because shopping districts are prominent visual features and major destinations, their appearance and quality influence how people feel about their community. Retail businesses are essential to the City's fiscal health.

A Strategic Plan Committee appointed by the City Council in 1988 gave Alameda a "C" for retail shopping, and conducted a survey of issues that identified "improved shopping/more convenient shopping" as a major need and opportunity. A question is how much more business can be attracted to Alameda, which is out of the way for nonresidents and does not have a large enough population to support large department stores or high-volume discounters. Three sources of increased sales will be: new residents, nonresidents attracted to restaurants and boating-related businesses, and the rising per capita disposable income of existing residents. Improved merchandising can capture sales made to Alamedans at off-Island locations.

TYPES OF RETAIL DISTRICTS

Regional Shopping Center: South Shore Center (500,000 square feet gross floor area; fully developed) has J.C. Penney and Mervyn's as well as two supermarkets. The General Plan reflects the assumption that South Shore Center will continue to be the only regional shopping center in Alameda.

"Main Street" Business Districts: Park Street (356,000 gross square feet of shopping-center-type floor area) and Webster Street (205,000 square feet) have restaurants and specialty stores, but lack the clusters of apparel stores that draw customers to larger shopping centers.

Community Shopping Centers: Fernside Shopping Center (90,000 square feet), Marina Village (115,000 square feet), and Harbor Bay Landing (60,000 square feet) each have a supermarket and a superdrug as anchors.

Neighborhood Business Districts: The 17 compact corner business districts, 10 of them at former Red Train stations, are important components of the city's traditional ambience. Most have a small grocery, a laundromat, one or two other stores or a bar, and little or no off-street parking.



Webster Street, Croll's Tavern



Park Street, circa 1890

Guiding Policies: Retail Business and Services

- 2.5.a Provide enough retail business and services space to enable Alameda to realize its full retail sales potential.

The proposed Business and Waterfront Improvement Project would provide public actions and financing to accomplish this in the Park and Webster Street downtown and Lincoln Avenue neighborhood shopping districts.

- 2.5.b Revitalize Alameda's historic downtown shopping districts on Park Street and Webster Street while maintaining their small-city scale.

The work of the Alameda Main Street Project is evident in both districts. The Park Street Historic District is on the National Register of Historic Places.

- 2.5.c Do not permit offices to occupy ground floor space suitable for retail within the Main Street business districts and the Neighborhood business districts.

Interruptions to the continuity of retail frontage decrease pedestrian traffic and diminish the synergy essential to a successful retail district.

- 2.5.d Encourage continuing improvements to the South Shore Center and other shopping centers.

South Shore attracts both Alamedans and customers from a larger trade area. The original design turned its back on the Bay and devoted little attention to landscaping. New development should take advantage of Bay view, and landscaping should be appropriate to the scale of the buildings.

- 2.5.e Maintain full-service community shopping centers serving all sectors of the City.

With three community shopping centers anchored by supermarkets (Fernside, Marina Village, Harbor Bay Landing) and two supermarkets at South Shore Center, Alamedans enjoy convenient access, variety, and competitive food prices.

- 2.5.f Maintain neighborhood business districts for small stores that attract mainly pedestrian traffic and can be acceptable neighbors for nearby residents.

Grocery stores, laundrettes/cleaners, and small restaurants can rely mainly on customers who walk from their homes.

- 2.5.g Encourage retention and addition of housing in the Park Street, Webster Street, and Neighborhood Business Districts.

Current (1990) zoning regulations allow dwellings as a conditional use in both the C-1 (Neighborhood) and C-2 (Central) business districts, but prohibit new structures devoted solely to residential use. Housing provided above retail space or on the rear half of parcels can add patrons and expand housing opportunities, provided tenants accept an environment in which commerce has priority.

The proposed Business and Waterfront Improvement Project would provide public actions and financing to accomplish this in the Park and Webster Street downtown and Lincoln Avenue neighborhood shopping districts.

Implementing Policies: Retail Business and Services

- 2.5.h Prepare a Specific Plan for the Webster Street Business District.

The Webster Street Business District could benefit from a Specific Plan that acknowledges its fragile retail character.

- 2.5.i Amend the Zoning Ordinance to limit building heights in the Park Street and Webster Street business districts to three stories above grade, measuring 35 to 40 feet, depending on roof configuration. Parking structures are to be limited by height only.

See Policy 3.4.d and 3.3.h in the City Design Element. Current zoning (1990) permits 100-foot buildings inconsistent with small-city character. Zoning text revisions should be written to avoid nonconforming status for the small number of existing buildings that would not conform to the new height limit.

- 2.5.j Reduce the extent of Neighborhood Business Districts by re-designating residential parcels zoned for commercial use to residential use wherever detailed study of each district demonstrates that an acceptable residential environment can be maintained or created.

The General Plan Diagram indicates the proposed extent of each business district. Detailed study and public hearings on Zoning Map amendments are likely to result in similar but not identical changes. Re-drawing is simple where commercial development is tightly bunched, but in several districts decisions must be made about the best future for housing surrounded by commercial uses.

- 2.5.k Limit the size of stores in Neighborhood Business Districts in order to avoid traffic and parking demand inconsistent with residential character.

To avoid transforming pedestrian-scale business districts into auto-oriented shopping centers, businesses that outgrow the existing small retail spaces should be encouraged to find sites elsewhere in Alameda where adequate off-street parking can be provided. Where only small stores are permitted, a lower ratio of parking spaces to floor area than is required in larger commercial areas may be reasonable.

- 2.5.l Plan for multilevel parking to serve the intensively developed retail segments of Park and Webster streets. Encourage construction of multilevel parking in shopping centers where necessary to enable them to reach full potential. Provide retail uses in the front portion of the structures' ground floors where necessary to provide continuity of ground floor retail uses or to connect such uses where they are now separated.

A 1989 Parking Needs Assessment Study by the Public Works Department found an overall need for 100-200 spaces in each of the Main Street business districts. In the intensively developed blocks of Park Street between Lincoln and Central, the deficit was 347 spaces, twice the current supply. Even if the 2.8 acres needed for this amount of surface parking were available, large surface lots would detract from Main Street character. See section 3.4 for related policies. The proposed Business and Waterfront Improvement Project would facilitate the provision of multi-level parking.

- 2.5.m Improve public transit service to shopping areas.

Transit use can be encouraged by providing bus shelters, by locating store entrances on the street with parking at the side and rear, and by charging for parking. Fees paid in lieu of providing on-site parking can be used for transit improvements. Other incentives and subsidies may be available to support shopper shuttles, dial-a-ride, and intra-island shuttles.

- 2.5.n Require that large parking areas serving shopping centers or other commercial uses be adequately landscaped with large-growing trees and that the trees be maintained in a manner that preserves and promotes natural growth form.

- 2.5.o Amend the C-1 and C-2 District regulations to permit residential uses by right as long as these uses are (a) located in structures also containing nonresidential uses, (b) are not located on the ground floor, and (c) meet all other zoning requirements, such as off-street parking.

2.6 SPECIFIED MIXED USE AREAS

Because much of the City was built before zoning, both the richness and the problems that can result from a mixture of land uses abound. The purposes of the Specified Mixed Use Classification are to stimulate economic development, encourage creativity, provide flexibility, and avoid monotony in development of large sites. Guiding policies set broad limits to the use mix for each mixed-use area and establish a minimum required housing component where appropriate.

Five mixed-use areas are designated. Area-specific policies follow the descriptions.

- MU1 **Island Auto Movie:** This largest single open site on the Main Island (10 acres) will be under increasing pressure to generate more rent than can be paid by the 1990 tenants -- a drive-in movie and a flea market.
- MU2 **Mariner Square:** The combination of views of an active stretch of the Estuary and of Oakland, boat berths, boat sales and repair, houseboats, and restaurants, all in a not-too-planned cluster, make this Alameda's most interesting waterfront segment. The General Plan preserves this character from possible market pressures by limiting additions of office space.
- MU3 **Ballena Isle:** Created by tidelands fill during the 1960s, the 21-acre City-owned site is under lease until 2029. Because the California Tidelands Act of 1913 requires uses to promote "commerce and navigation," the site cannot be used for residential development. The view toward San Francisco is spectacular.
- MU4 **Northern Waterfront, Grand Street to Willow Street:** The half-mile stretch of Clement Avenue east of Grand serves Alameda's most diverse employment area. Marinas, offices, boat sales, repair and storage, offices, woodworking, pencil manufacturing, auto repair and storage, several retail stores, and the City's Bureau of Electricity are among the dozens of users.

MU5 Northern Waterfront, Willow Street to Oak Street: The change anticipated in this segment provides an opportunity for Alameda to add highly desirable housing, stimulate improvement of housing east of Oak Street that is currently zoned for commercial-industrial use, and to provide an Estuary Park. Half of the north frontage of Clement is occupied by the Naval Reserve Training Center, which will remain. Other uses are steel fabricating, mini-storage, a dredging equipment yard, and a boatyard. The four blocks on the south side of Clement Avenue are occupied by a boat storage building/yard, Thompson Field (Alameda High School athletic field adjoining McKinley Park), a full block of housing, and a 5-acre site occupied by a die-casting plant and an automobile service establishment.



Waterfront near Mariner Square

Guiding Policies: Specified Mixed Use Areas

- 2.6.a **Island Auto Movie Area:** Implement a development program that includes housing and may include offices. Require 150 to 200 two family residential units (15 to 20 units per net acre) and permit up to 30,000 square feet of office space.

Across the street from both Marina Village Shopping Center and Independence Plaza senior housing, this site can make a significant contribution to Alameda's housing needs while generating less traffic than if developed as a business park. The program would allow mixed use structures, highly visible office buildings along Constitution Way, or all-residential development. The proposed Business and Waterfront Improvement Project would provide public actions to stimulate development of this site.

- 2.6.b **Mariner Square:** Preserve the existing mix of water-related uses and add onshore live-work space. To avoid displacing water-related uses, office space additions are limited to 5,000 square feet.

The proposed Business and Waterfront Improvement Project would provide public actions to stimulate development of this site.

- 2.6.c **Ballena Isle:** Implement a development program consisting of a hotel of up to four stories and 220 rooms plus conference rooms, with improvements and maintenance of the 6.5-acre shoreline parcel for public open space as a condition of development approval.

A Ballena Isle hotel would provide first-class hotel space, now lacking, and would generate less traffic than a similar floor area occupied by offices. The shoreline parcel, now used for fishing and viewing, should be improved as permanent public open space. See Policy 6.1.f in the Parks and Recreation Element.

- 2.6.d **Grand to Willow Street (Northern Waterfront):** Continue efforts to minimize industrial-residential conflicts on the south side of Clement Avenue where current zoning matches current use at most locations. Live-work space for artists and artisans would be an appropriate use in many cases. To ensure maintenance of a working waterfront and to avoid employment densities that would create heavy traffic, office and retail space is to be limited to approximately its current share of total floor area. The intent is to maintain an environment suited to the types of businesses now located in the

area --- both those that are related to the waterfront and those that are not.

The proposed Business and Waterfront Improvement Project would provide public actions to stimulate development of this site.

- 2.6.e **Willow Street to Oak Street (Northern Waterfront):** Provide for redevelopment of existing industrial sites for 250 to 350 two family residential units, treating the area north of Clement Avenue as an extension of the residential neighborhood to the south.

The proposed Business and Waterfront Improvement Project would provide public actions to stimulate development of this site.

- 2.6.f **Willow Street to Oak Street (Northern Waterfront):** Create a continuous 300-foot-wide "marina green" park along the Estuary.

See Policy 3.2.i in the City Design Element and Policy 6.1.e in the Parks and Recreation Element.

Implementing Policies: Specified Mixed Use Areas

- 2.6.g **Mariner Square:** Limit offices to 20 percent of nonresidential floor area with a majority of the space to be devoted to marine-related uses.

- 2.6.h **Grand to Willow Street (Northern Waterfront):** Limit office/industrial/retail development to .5 FAR, excluding area serving open uses, providing shoreline access, or used for vehicular access to other facilities within the Specified Mixed Use area.

The intent of this provision is to support waterfront related and non-waterfront related uses of the types now existing. The policy would prevent over-building that would occupy area needed to support viable marine-related activities. The industrial character is not to be replaced by typical business park landscaping or building intensity.

- 2.6.i **Willow Street to Oak Street (Northern Waterfront):** Rezone existing nonresidential parcels to a residential-industrial mixed use district that would allow industrial use not more intense and not occupying more floor area than the 1990 use or residential development consistent with Measure A.

Existing industry would not become nonconforming under zoning regulations, but could not expand in this area. Residential development would occur where a developer has a site large enough to create a residential environment. Uses would change only in accord with the plans and schedules of landowners.

- 2.6.j **Willow Street to Oak Street (Northern Waterfront):** Seek BCDC cooperation and Coastal Conservancy funding for the Estuary Park and make an early commitment to construction.

The park would serve the city sector with the greatest current shortage of parkland. Construction would be convincing evidence that the City is committed to implementation of the General Plan. The proposed Business and Waterfront Improvement Project would provide public actions and financing to facilitate the provision of this park.

Local funding sources could include income from leases of public property to adjacent private property owners. Where provision of public access to the shoreline is infeasible, lease payments could include an amount to be used to provide shoreline access at another location.

2.7 OFFICES

Offices are located in the business districts, in two administrative-professional areas on Willow Street, and in high-density residential areas (R-5 and R-6 zoning districts). Office users offer a variety of accounting, insurance, real estate, law and health-related services to Alameda residents and businesses.

Current (1990) zoning regulations permit offices in the Administrative-Professional District, the R-6 Hotel Residential District, and in the industrial districts. Offices are a conditional use in the R-5 District and in the C-1 and C-2 districts if at ground level within the front half of the building floor space. The mapped A-P districts are fully developed with offices and Alameda Hospital.

Large offices are attracted to the business parks and small offices locate in the Pacific Shops area north of Clement Avenue, the R-6 area near City Hall or in the R-5 areas on Lincoln, Santa Clara, and Central avenues east of Grand or between Webster and Eighth streets.

The issue is whether new administrative and professional office space should continue to displace housing, or be limited to business parks or to upper floors and neighborhood or community business districts.

Guiding Policies: Offices

- 2.7.a Provide ample space for local-serving office by encouraging construction of offices on second and third floors over retail space.

As Alameda nears residential buildout, demand for additional office space to serve residents will be moderate. New and refurbished space in the business districts can meet the need and would enhance both the small city character and the economic vitality of Park Street and Webster Street. Mixed office-retail is regaining acceptance in California cities after an extended period of rejection by office tenants who felt that pure office buildings lent prestige. If conversion of housing to offices in residential zones is eliminated as an alternative, there will be additional interest in offices over stores.

The proposed Business and Waterfront Improvement Project would provide public actions and financing to stimulate the provision of new and refurbished upper floor office space in the business districts.

- 2.7.b Do not permit offices in residential areas designated on the General Plan Diagram.

Dispersing local-serving offices in existing higher-density residential areas would reduce housing opportunity and residential amenity. Without such a policy, market economics would result in substantial office intrusion into R-5 zones. The area adjoining City Hall designated for continued office use on the General Plan Diagram (as on the CLUP and the Zoning Map) is less attractive for office developers than the R-5 areas. The reason is that there are few remaining one family homes and the cost of acquiring apartment buildings to create office sites is high.

Implementing Policies: Offices

- 2.7.c Revise zoning regulations to preclude approval of offices in areas designated for residential use on the General Plan Diagram.
- 2.7.d Assist owners of earthquake safe retail structures in Park and Webster Street Business Districts to render 2nd and 3rd floor office or residential uses accessible to the disabled. Extend the same assistance to owners of un-reinforced masonry structures as they begin measures to bring the structures to life-safe status.

The proposed Business and Waterfront Improvement Project would provide public actions and financing to facilitate these structural improvements.

- 2.7.e Plan for multilevel parking to serve the office uses located within the intensely developed retail segments of Park Street and Webster Street.

2.8 BUSINESS PARKS AND INDUSTRIAL AREAS

Research and development, manufacturing, and distribution jobs are located both in business parks and in traditional industrial areas along the city's Northern Waterfront. Industrial tenants range from software and biotechnology firms to lumber and oil handling, boatbuilding, and steel fabrication. The distinction between light and heavy industry is increasingly blurred as air quality regulations control emissions. Alameda's heavy industries process bulky items, need rail and water access, and use large and sometimes noisy equipment. Light industries, some of which have the characteristics of offices, generate more traffic per acre during peak hours.

There are five business-industrial areas:

Harbor Bay Business Park: The approved development plan will add 4.1 million square feet of office and research and development space, including a conference hotel and retail space site. Handsome, generously landscaped one- and two-story buildings provide 1.1 million (1990) of the ultimate 5.2 million square feet that will house 17,300 or more employees. High-rise buildings, 100 feet as of right and 156 feet subject to discretionary review, can be built at the business park.

Marina Village: This 205-acre mixed use project on the site of the former Bethlehem Shipyard will include 1.3 million square feet of office-research and development space and 4,300 jobs. The project was 71 percent complete in 1990. Business park development near the Posey Tube, while not a part of the Marina Village project, is of similar character.



Marina Village Shopping Center

Encinal Terminals Area: Alameda Belt Line Railroad and Encinal Terminals depend on and are depended upon by five industries that have been in Alameda for many years and have indicated their intention to stay (Weyerhaeuser, Del Monte, Pennzoil, Alameda Liquid Bulk, and Georgia-Pacific). To shield such sites from pressures for commercial-residential conversion, the Seaport Plan prepared by the Bay Conservation and Development Commission (BCDC) and the Metropolitan Transportation Commission (MTC) has designated Encinal Terminals as a Port Priority Use Area.

Alameda Gateway: The City owns about half of this 35-acre site of the former Todd Shipyard at the north end of Main Street, which is designated Port Priority by the Seaport Plan. A 1987 Development Agreement between the City and the lessor and owner of the remaining portion of the site extends to 2034, and notes that uncertainties about a turning basin proposed by the U.S.

Army Corps of Engineers at the urging of the Port of Oakland make planned development zoning impractical. Current tenants have short-term leases, and are marine-related or other types of businesses needing warehouse or office space. The developer projects an addition of 263,000 square feet of business park-warehouse space and a total of 800 jobs at buildout.

Clement Avenue; Blanding Avenue: East of Grand Street, marine-related businesses, miscellaneous manufacturing, and offices line Clement Avenue. A 700-foot stretch of Estuary frontage on Blanding Avenue east of Park Street is occupied by industry, half of which is marine-related.



Harbor Bay Business Park

Guiding Policies: Business Parks and Industrial Areas

- 2.8.a Support development of Harbor Bay Business Park consistent with existing approvals and agreements.

The quality and size of this project enable it to make a major contribution to the identity of Alameda and to the economic health of the East Bay.

2.8.b Maintain existing and potential bulk cargo seaport capacity at Encinal Terminals and Alameda Gateway consistent with the Seaport Plan prepared by the Metropolitan Transportation Commission and the Bay Conservation and Development Commission.

2.8.c Support continued operation of manufacturing and distribution industries using seaport and rail facilities.

These businesses are efficiently located for employee access and for receiving and shipping bulky goods. They provide scarce blue-collar job opportunities and contribute about half as much traffic per acre as offices. The major threat to their continued operation is the real estate market's expectation that an alternative use would pay more for the land, coupled with the belief that Alameda would amend its General Plan if necessary to permit more intensive use. This Plan supports their long-term presence.

2.8.d Continue working to eliminate residential-industrial conflicts based on the assumption that the boundaries between the uses on the General Plan Diagram will endure 20 years or longer.

Where there is agreement that a boundary is firm, it is reasonable to expect development approvals to require developers to pay for improvements that mitigate conflicts.

2.8.e Maintain maritime character where the Northern Waterfront is to remain in industrial use.

Specified Mixed Use Area development programs in Policies 2.6.b, 2.6.d and 2.6.i provide safeguards against displacement of water-related industries by offices or other commercial development.

Implementing Policies: Business Parks and Industrial Areas

2.8.f Revise zoning regulations to remove cumulative provisions that permit all uses except housing in industrial areas.

This policy may be critical to preservation of the sea-rail link and the existing industries that use it. If zoning regulations in force in 1990 are not revised, a strong demand for office space or waterfront hotels could suddenly displace industry.

If future economic conditions warrant a major change from the designated industrial use, the City of Alameda should initiate revision of the General Plan.



Alameda Beltline along Buena Vista Avenue

- 2.8.g Review zoning regulation performance standards and revise if necessary to improve equity and enforceability.

Current (1990) regulations permit uses from which "noise, smoke, dust, noxious fumes and gases, glare, heat and vibration are confined to the premises or held to volumes, intensities and levels at the perimeters of individual properties which are no greater than those in the general area, . . ." This does not meet regional standards and cannot be effectively enforced.

2.9 FEDERAL GOVERNMENT FACILITIES

Federal government jobs held by military personnel and civilians total nearly half of all jobs in Alameda. Five sites are in use: Alameda Naval Air Station, Naval Supply Center Oakland (Alameda Annex and Alameda Facility), the U.S. Coast Guard (Coast Guard Island), the Naval Reserve Training Center on Clement Avenue, and the Federal Center on McKay Avenue. The City and the Federal agencies consult on development issues, but the City has no power to regulate development on Federal sites. However, the City does have the opportunity to evaluate environmental impacts of any proposed development.

During 1990 there has been much speculation about the future of Federal facilities because of the possibility of a substantial cut in the Department of Defense budget. As of August 1990, no Federal decisions have been made that would justify including in the General Plan proposals for alternative uses of Federal sites. Consequently, this General Plan assumes all Federal facilities will remain active in Alameda at their 1990 levels. If all or a portion of a major facility were to be declared surplus, closure would not occur until several years following the announcement. Alameda would use this time to prepare detailed evaluations of alternative uses of the sites and facilities, to solicit the views of Alamedans, and to amend the General Plan.

There is also the possibility that closure of military facilities elsewhere would result in more intensive activity at Alameda NAS.

Policies in other parts of the Plan concerning Federal government facilities are found in the Open Space and Conservation Element, Section 5.1 and in the City Design Element, Section 3.2.

Guiding Policies: Federal Government Facilities

- 2.9.a Support the continued operation of Alameda Naval Air Station at its 1990 level.
- 2.9.b Maintain close communication with the United States Coast Guard regarding future planning and development of facilities on Coast-Guard Island.

Implementing Policy: Federal Government Facilities

- 2.9.c Establish a liaison committee that will maintain close communication with the Alameda Naval Station and will facilitate coordination between planning and development at the NAS and in adjoining areas.

2.10 MANAGEMENT OF CITY-OWNED LAND

In addition to public buildings, parks, utilities, and right-of-way, the City of Alameda owns about 100 acres of submerged land, tideland, and upland that are not currently being used for a public purpose. Most of the larger holdings, including City-owned portions of Alameda Gateway, Encinal Terminals, and Ballena Isle, have leases and options that run until 2029.

Guiding Policies: City-owned Land

- 2.10.a Establish long-range management policies for City-owned real property based on comparative evaluation of potential for public use and enjoyment, public- or joint-venture enterprise development, or lease for development.

A Port Authority Task Force appointed by the City Council in 1989 has discussed steps that could lead to more profitable asset management by the City as part of the Task Force's investigation of ways to ensure preservation and development of marine/harbor facilities in the public interest.

- 2.10.b Investigate and pursue potential opportunities to acquire underused State or Federal property in Alameda.

- 2.10.c Stop the trend toward private use of public property.

This policy from the 1979 CLUP refers to obstruction of rights-of-way that provide access to the shoreline and to structures that encroach beyond the U.S. bulkhead or pierhead lines.

Implementing Policies: City-owned Land

- 2.10.d At locations where it is infeasible to provide public access to the shoreline, or allow public use or publicly owned shoreline, such as along the Tidal Canal, continued private use should be permitted only if mitigation is provided by improving public shoreline access elsewhere in the City.
- 2.10.e Support completion of the Bayview Shoreline Preserve.



City of Alameda

General Plan

3 City Design Element

3 CITY DESIGN ELEMENT

Alameda has a clear identity -- certainly it is among the half dozen Bay Area cities with the strongest visual image. During an era when bland, look-alike communities are the norm, unique cities are an increasingly prized resource. But identity cannot be taken for granted; the richness of Alameda's historic urban fabric must continually be defended against pressures for development conforming to current standard practice. And not all that is unique or memorable is pleasant -- there are bleak areas, clutter, and missed opportunities, as well as opportunities to be seized.



Aeolian Yacht Club from pathway

The City Design Element addresses visual issues at a citywide scale. The quality of architectural and landscape design for individual sites and projects is also of great importance, as is constantly demonstrated by Alameda's wide variation in quality from block to block and lot to lot. Policy 3.3.e calls for detailed design guidelines. (See Figure 3-1, City Design Framework.)



City of Alameda - **Figure 3-1**
City Design Framework

3.1 ENTRANCES

Arrival in Alameda is a distinct event, whether by tube, bridge, or along San Leandro Bay. The City design objective is to establish immediately the desired character of Alameda for a person entering for the first or 10,000th time. A handsome building, a cluster of trees, or other prominent entry feature can give form to the journey.

Guiding Policy: Entrances

- 3.1.a Alameda's entrances should create a sense of civic pride.

Implementing Policies: Entrances

- 3.1.b Posey-Webster Tubes:

Work with Caltrans to refurbish, paint and light the portal towers.

Prepare an overall landscaping and design scheme as part of the Webster Street specific plan. Use large-growing trees to unify the entrance area and to make a strong visual statement. (See Policy 2.5.g.)

Diminish the visual perception of an expanse of pavement along Constitution Way and Webster Street by creating a grove of trees on existing excess right-of-way, in Neptune Park, on the College of Alameda campus, and in parking lots for adjoining office buildings.

Preserve the view of the Oakland skyline and hills for northbound travelers.

Work with Caltrans to replace freeway-scale directional signs with smaller ones that convey the slower-speed character of Alameda.

Bleak, wide open spaces have made the Tube Alameda's least friendly entrance, but a strong planting scheme combined with completion of Neptune Park, approved offices, and development on the drive-in site can transform it.

3.1.c Park Street Bridge:

Discuss with County staff the possibility of painting the bridge a strong color that will give it more visual weight. Add trees on Park Street.

This busiest and most cluttered entrance can convey the quality of Alameda without severe limitation on signs along auto row.

3.1.d Miller-Sweeney (Fruitvale) Bridge:

Add trees on open land to the west and south to announce the transition from an industrial area to a residential neighborhood and to improve the environment for existing and planned homes.

3.1.e High Street Bridge:

Discuss with County staff the possibility of painting the bridge a color appropriate to a residential neighborhood. Improve the landscape quality of this entrance in conjunction with traffic improvements to the High Street/Fernside Boulevard intersection.

3.1.f Bay Farm Island Bridge:

Ensure that the design for Bridgeview Park enhances the Bay Farm Island Bridge entry onto the Main Island.

3.1.g Cross-Airport Roadway:

Evaluate design treatment options for the entry of the Cross-Airport Roadway into Alameda.

The nearby Teleport Tower at Harbor Bay Business Park will be the landmark, but City identity will need to be established.

3.2 EDGES, VISTAS, FOCAL POINTS

Guiding Policies: Edges, Vistas, Focal Points

3.2.a Maximize views of water and access to shorelines.

The sense of being on an island is easily lost where views of the water are blocked. On the northern and eastern shorelines of the Main Island, few opportunities now exist for views or access to these shorelines and marinas impede visual access to open water.



Harbor Bay Business Park's Teleport Tower and downtown San Francisco

- 3.2.b Urge implementation of proposals of the Alameda Naval Air Station Master Plan that would improve the appearance of this western boundary of Alameda.

Proposals for gate improvements and landscaping along the perimeter have not been funded.

- 3.2.c Maintain and extend Alameda's outstanding street tree system using the adopted Street Tree Management Plan as a guide in the decision making process.

The City's 12,000 street trees make the wide, heavily trafficked boulevards livable and place the Gold Coast among the finest existing Victorian neighborhoods.

The few barren streets in Alameda demonstrate how bleak a densely built city can be without trees. The Street Tree Management Plan includes detailed proposals for care of existing trees and for the more than 3,500 identified vacant planting sites.

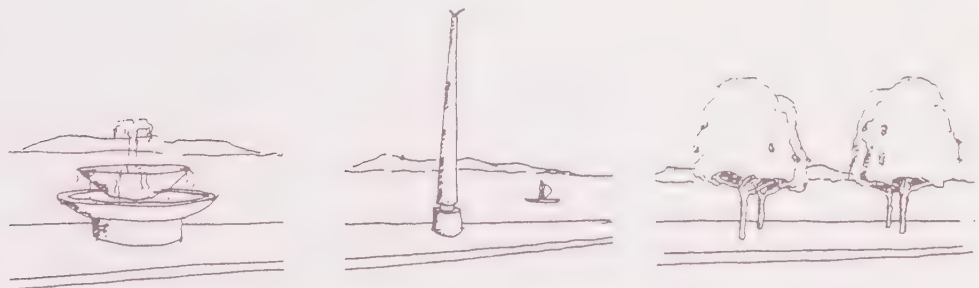


Park Street Landing project includes public access as required by the Bay Conservation and Development Commission.

Implementing Policies: Edges, Vistas, Focal Points

- 3.2.d Maintain views and access to the water along streets and other public rights-of-way that extend to the bulkhead line. Construct benches, ramps, rails, and seating appropriate for viewing and access, and provide walls or other screening where needed to protect adjoining property.

Westline Drive, Grand Street, Park Street, Central Avenue and Encinal Avenue are candidates for architectural or landscape features that would enhance the meeting of land and water.



3.2.e Encourage landmark structures at prominent locations.

The Housing Authority site at the southeast corner of Webster and Atlantic is an example of such a location.



Potential greenway

3.2.f Work to establish greenways on unused railroad right-of-way adjoining Main Street and Atlantic Avenue, extending east through the railroad yard to Sherman Street.

In addition to providing bike and pedestrianways, a 100-foot-wide greenway could have landmark trees in the sector of the City that is most in need of a greater presence of nature.

3.2.g Work with BCDC staff to prepare a schematic plan for development of the 100-foot-wide strip above mean high tide on properties likely to require BCDC development approval.

The schematic plan should provide for public access to the shoreline in all cases and provide shoreline streets wherever possible. Specific opportunities for shoreline streets should be identified. The plan should include design standards and guidelines for buildings, streets, pedestrian and bicycle routes, signage and landscaping.

Bay Farm Island, Park Street Landing, and the San Leandro Bay shoreline east of the Aeolian Yacht Club demonstrate BCDC's ability to secure high-quality development of the shoreline for public use. Similar opportunities exist on portions of the Northern Waterfront.

- 3.2.h Work with the East Bay Regional Park District to plan and build a promenade along Shore Line Drive of a quality comparable to the promenade bordering Harbor Bay Parkway.

The East Bay Regional Park District (EBRPD) stresses the importance of avoiding encroachment onto the dune system put in place to protect the beach and Shore Line Drive. EBRPD recommends that any promenade, if built, should occupy existing 60-foot street right-of-way.

- 3.2.i Ensure that sections of the Estuary waterfront remain visually unobstructed.

Most of the Estuary waterfront not devoted to industrial use is developed as marinas which block vistas. The proposed Estuary Park will be on the most prominent viewpoint.

3.3 ARCHITECTURAL RESOURCES

The Historic Preservation Element, adopted in 1980, was based on a survey of about 80 percent of the Main Island; it identified 4,000 addresses as having architectural and historical resources. The report noted that 1,400 structures, most of them built before the turn of the century, had been demolished since World War II. Recommendations for preservation include designation of Heritage Areas (no added regulation), and Historic Districts (design regulation). Historic preservation district boundaries were not proposed, but three Heritage Areas subsequently have been studied under the Certified Local Government Program, and designated by the City Council: Bay Station (1986), Park Avenue (1988), and Burbank-Portola (1989). Since the adoption of the Historic Preservation Element, the City completed detailed surveys of unreinforced buildings, commercial buildings on Webster Street, and buildings and sites in the northern waterfront. These surveys fill in gaps in the original survey, leaving few buildings and sites undocumented.

Implementing Policies: Architectural Resources

- 3.3.a Continue to identify quality architecture of all periods in Alameda's history and participate in programs to increase owners' and buyers' awareness of the importance of preservation.



1200 Block, Pacific Avenue

- 3.3.b Consider formation of Historic Districts within which alterations to existing structures would be regulated to maintain neighborhood scale and historic character.
- 3.3.c Maintain strong demolition control for historic properties.
- 3.3.d New construction, redevelopment and alterations should be compatible with historic resources in the immediate area.
- 3.3.e Develop detailed design guidelines to ensure protection of Alameda's historic, neighborhood, and small-town character. Encourage preservation of all buildings, structures, areas and other physical environmental elements having architectural, historic or aesthetic merit, including restoration of such elements where they have been insensitively altered. Include special guidelines for older buildings of existing or potential architectural, historical or

aesthetic merit which encourage retention of original architectural elements and restoration of any missing elements. The design guidelines to include detailed design standards for commercial districts.

- 3.3.f Regulate development in neighborhood business districts to maintain a street-wall, with most structures built to the property lines, entrances directly facing the sidewalk, and parking at the rear.

- 3.3.g Encourage off-site and multi-level parking in the Park Street and Webster Street business districts as essential to Main Street character. To maintain pedestrian character and visual interest, avoid locating parking structures at street level on corners and along retail streets.

These areas should be occupied by retail activities and public uses.

- 3.3.h Regulate development in the Park Street and Webster Street business districts to encourage two- and three-story buildings extending to the front and side property lines, with entrances directly facing the sidewalk, and parking at the rear.

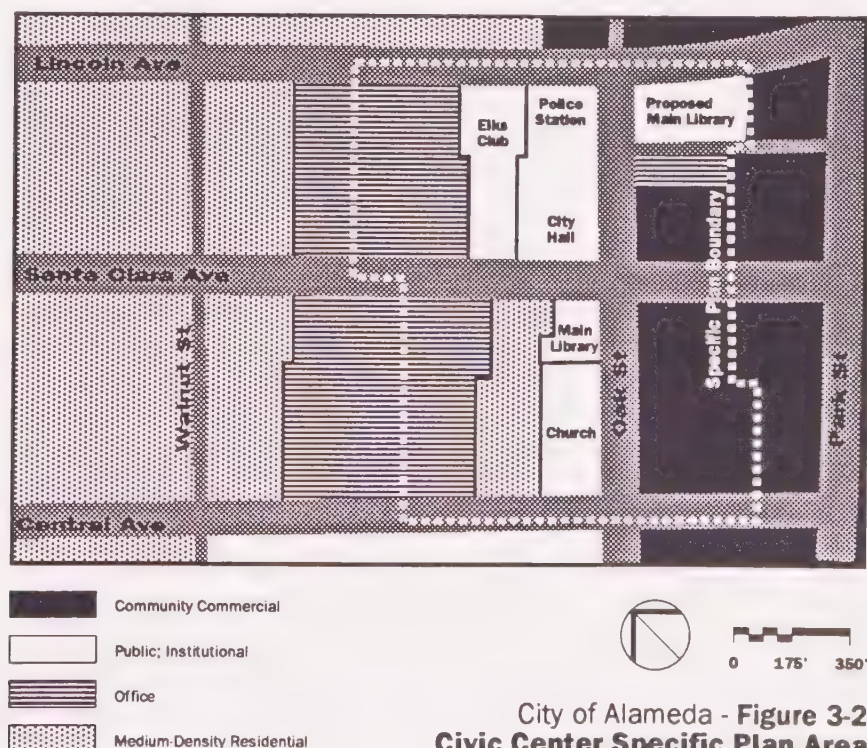
- 3.3.i Preserve all City-owned buildings and other facilities of architectural, historical or aesthetic merit. Prepare a list of these facilities and develop an Historic Facilities Management Plan that provides procedures for preserving their character-defining elements, including significant interior features and furnishings. Include in the Management Plan design guidelines or standards and a long-term program to restore significant character-defining elements which have been altered.

- 3.3.j Encourage owners of poorly remodeled but potentially attractive older buildings to restore the exterior of these buildings to their original appearance. Provide lists of altered buildings which present special design opportunities and make the lists widely available. Develop financial and design assistance programs to promote such restoration.

- 3.3.k Require that any exterior changes to existing buildings receiving City rehabilitation assistance or related to Use Permits, Variances or Design Review, or other discretionary City approvals be consistent with the building's existing or original architectural design unless the City determines either (a) that the building has insufficient existing or original design merit of historical interest to justify application of this policy or (b) that application of this policy would cause undue economic or operational hardship to the applicant, owner or tenant.

3.4 CIVIC CENTER SPECIFIC PLAN

The imposing red-brick City Hall (1896), the Carnegie Library building (1903), and the Elks Club (1909) form the nucleus of Alameda's civic center. The Police Administration Building (1978) was designed to relate to the City Hall, and the library proposed on the site of the LinOaks Motel east of Oak Street provides an opportunity to create an identifiable civic center. New and existing private buildings of compatible design and multi-level parking structures replacing parking lots would serve both the civic center and the adjoining Park Street business district. (See Section 6.4, Cultural Facilities, for related policies.) (See Figure 3-2, Civic Center Specific Plan Area.)



Guiding Policies: Civic Center

3.4.a Using City Hall as the centerpiece, develop the surrounding area as an identifiable civic center that will enhance civic pride in Alameda.

3.4.b Rely on design character and provision of coordinated open spaces rather than narrow restrictions on use to create a sense of civic center. In addition to public and institutional facilities, permitted uses are to include pocket parks, offices, retail stores, residential units, and parking.

Historic buildings in the area surrounding City Hall, including the main library constructed in the Neo-classical style and the Elks Club in the Colonial Revival style, could contribute to the design theme of the Civic Center.

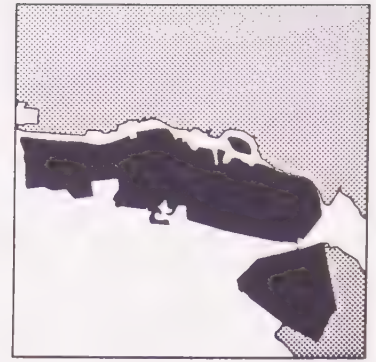
Implementing Policies: Civic Center

3.4.c Prepare a list of desired public and private civic center users and their space needs. In addition to a new library, the list might include City functions now located elsewhere, a museum, a new theater, or a refurbished Alameda Theater, a downtown minipark, offices, and restaurants.

3.4.d Prepare and adopt a Civic Center Specific Plan for the 12-acre Specific Plan area delineated on the General Plan Diagram. The plan is to include uses, building footprints and envelopes (location and bulk), architectural and landscape design character, street and pedestrianway design, and schematic design of parking areas/structures.

The level of regulation and means of implementation of the Specific Plan can vary over a broad range. Initial actions may include only library design and parking management or construction of the first parking structure, but these must occur in the context of a plan for the entire area. Property owners will need to know where parking will be located, how it will be financed, and what regulations, if any, in addition to current zoning will affect their holdings.

3.4.e Encourage and consider City participation in an assessment district to build parking structures serving private and public uses.



City of Alameda

General Plan

4 Transportation Element

4 TRANSPORTATION ELEMENT

Although Alameda has about nine jobs for every 10 workers, 71 percent of employed residents worked outside the City in 1980. Twenty percent of out-commuters used transit, but only 6 percent of employed residents who worked in Alameda took the bus. By 2010 the number of Alameda jobs is projected to exceed the number of employed residents, and the share of out-commuters may be slightly reduced. Morning and evening peak hours will continue to strain the capacity of the five existing connections to the East Bay mainland and the Bay Farm Island bridge. About three-quarters of the 18,600 projected new jobs will be in Harbor Bay Business Park.

TRANSPORTATION ISSUES

Because virtually every street in Alameda is a residential street, traffic is a major issue. After considering possible ways to avoid congestion by increasing the capacity of routes across the Main Island, participants at a General Plan workshop, the Planning Board, and the City Council rejected this solution. Alternatives to the single-occupant automobile, limiting street capacity, and new routes between I-880 Freeway and Bay Farm Island were seen as desirable alternatives. Current (1990) conceptual studies for a second Bay crossing being conducted by the Metropolitan Transportation Commission could threaten Alameda's freeway-free character, as did similar proposals 20 years ago.

4.1 STREET SYSTEM

Excepting South Shore and a portion of Fernside, the Main Island street system is a 19th-century grid featuring wide east-west boulevards that carried street car tracks and two north-south commercial streets -- Webster Street and Park Street -- that are the principal connections to the mainland. Recent construction of Constitution Way diverts traffic from Webster Street to Eighth Street. Traffic is dispersed because drivers have a choice of routes to most destinations. Bay Farm Island, most of which was planned in the 1970s, is dominated by landscaped arterial streets; access to homes is from collector streets and cul-de-sacs. (See Figure 4-1, Street and Transit System.)

MEASURING CONGESTION

Table 4-1 defines traffic Levels of Service (LOS). LOS C is a desirable goal, but most cities in metropolitan areas experience LOS D or worse at some intersections during peak commute hours.

TABLE 4-1
SERVICE LEVEL DEFINITIONS
FOR SIGNALIZED INTERSECTIONS

Level Of Service	Description
A	Describes operations with very low delay, i.e., less than 5 seconds per vehicle. This occurs when signal timing is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.
B	Describes operations with delay in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good signal timing and/or short cycle lengths.* More vehicles stop than for LOS A, causing higher levels of average delay.
C	Describes operations with delay in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair signal timing and/or longer cycle lengths. Some vehicles may wait for more than one cycle of the signal. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Describes operations with delay in the range of 25.1 to 40.0 seconds per vehicle. At level "D", the influence of congestion becomes more noticeable. Long delays may result from some combination of unfavorable progression, long cycle lengths, or high volume/capacity ratios. Many vehicles stop, and many will wait through more than one cycle of the signal. The City of Alameda would prefer that all intersections operate at Level of Service D or better.
E	Describes operations with delay in the range of 40.1 to 60.0 seconds per vehicle. These high delay values generally indicate poor signal timing, long cycle lengths, and high volume/capacity ratios. Many more vehicles will wait through more than one cycle of the signal.
F	Describes operations with delay in excess of 60.0 seconds per vehicle. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. Poor signal timing and long cycle lengths may also be major contributing causes to such delay levels.

*"Cycle length" indicates the amount of time between the beginning of one green light and the beginning of the next green light.

Sources: Transportation Research Board, *Highway Capacity Manual*, 1985.



Year Year
2010 1989
0.0/0.0

Average Daily Traffic (# of vehicles in thousands) in 2010 and 1988-89

- Minor Street
- Major Street
- Freeway
- Proposed Light Rail Transit
- Proposed Roadway
- State Route

- Minor Street
- Major Street
- Freeway
- Proposed Light Rail Transit
- Proposed Roadway
- State Route

Note: */ denotes ADT volume not available



City of Alameda - **Figure 4-1**
Street and Transit System

PROJECTING FUTURE TRAFFIC

The average daily traffic (ADT) illustrated for street segments in Figure 4-1 and the Levels of Service (LOS) for intersections listed in Table 4-2 describe conditions that would exist at buildout (assumed to occur in 2010) if 1990 travel habits remain unchanged. Buildout service levels of D or below indicate the importance of increasing transit use and implementing a Transportation Systems Management (TSM) program.

Projections were prepared by adding trips that would be generated by anticipated development in Table 2-6 (Land Use Element) to traffic volumes measured during 1988-89, and accounting for diversion resulting from construction of the 66th Avenue Connector and the Cross-Airport Roadway. Recent traffic studies prepared for the City were also used. (See bibliography accompanying the General Plan EIR.)

Guiding Policies: Street System

- 4.1.a Designate a system of major streets and minor streets as a basis for managing traffic to minimize intrusion in residential neighborhoods.

The street system shown on the General Plan Diagram and in Figure 4-1 indicates major streets and minor streets. Unless the functions of streets are determined by General Plan policy, there is no justification for traffic control measures that shift traffic from one street to another.

- 4.1.b Encourage traffic within, to, and through Alameda to use the system of major streets by providing traffic control measures to ensure smooth flow.

Examples include provision of left-turn lanes, limiting left turns, and signal timing.

- 4.1.c Do not increase through-traffic capacity on the Main Island.

Capacity increases would disrupt neighborhoods, would attract more traffic, and would dissuade pedestrians and bicyclists.

TABLE 4-2
INTERSECTION SERVICE LEVEL EVALUATION
EXISTING CONDITIONS AND BUILDOUT

Intersection	P.M. Peak Hour	
	1988-89 Service Level	Buildout Service Level With Mitigation
Main & Atlantic Avenue	C	D ¹
Third & Atlantic Avenue	B	C
Poggi & Atlantic Avenue	B	C
Webster Street & Atlantic Avenue	B ²	D ^{1,3}
Constitution Way & Atlantic Avenue	A	A
Park & Clement (1)	D	C
Fernside & High Street	C	A-B
Webster & Buena Vista	A-B	B
Constitution Way & Buena Vista	A-B	C
Sherman & Buena Vista	C	C
Grand & Buena Vista	C	A
Oak & Buena Vista	A	A
Park & Buena Vista (2)	D	D
Tilden & Buena Vista	A	A
Main & Pacific (3)	B	D
Third & Pacific	A	A
Webster & Lincoln	A-B	A
Constitution Way & Lincoln	A	C
Sherman & Lincoln	A	C
Grand & Lincoln	A	C
Oak & Lincoln	A	B
Park & Lincoln	C	D
Grand & Santa Clara	B	C
Oak & Santa Clara	B	C
Park & Santa Clara	C	D
Broadway & Santa Clara	C	C
High & Santa Clara	A	A
Ballena Bay & Central	A	C
Webster & Central (4)	B-C	D
8th & Central (5)	C	E/F
Sherman & Central	A	A
Grand & Central (6)	C	D-E
Oak & Central	A	A

Continued

Table 4-2, *Continued*

Intersection	P.M. Peak Hour	
	1988-89 Service Level	Buildout Service Level With Mitigation
Park & Central	C	C
Broadway & Central	A	A
Grand & Encinal	A	C
Oak & Encinal	A	A
Park & Encinal	B	B
Broadway & Encinal	A	A
Westline & Otis (7)	C	D
Grand & Otis	B	B
Park & Otis (8)	E	D
Broadway & Otis	B	B
High & Otis	D	C
Broadway & Bayview	A	A
Fernside & Otis	D	D
Doolittle & Island Dr	B ⁴	E
Harbor Bay Pkwy & Doolittle (9)	A	E-F
Island & Bridgeway	A	B
Harbor Bay Pkwy & Maitland (9)	A	F
Island & Mecartney	A	A
Harbor Bay Pkwy & Cross-Airport Rdwy (9)	N/A	F

- Notes:
- ¹ A.M. non-Navy peak exceeds P.M. peak.
 - ² Intersection at Level D in A.M. Peak Hour
 - ³ Due to accident record, non-optimum signal phasing is required and LOS will decline.
 - ⁴ Observations in the A.M. Peak Hour suggest an LOS range of E to F for this intersection.

Parenthetical numbers listed after intersections are cross-referenced to projects required to achieve buildout service levels, as shown in Table 4-3.

Projections are based on previous traffic studies for the eastern and western ends of the City (Abrams Associates, 1988; Fehr and Peers, 1987); growth at intersections not included in above reports at .5 percent per year; and additional development as proposed by the General Plan. Manual estimates of traffic diversion to the 66th Avenue crossing were prepared. Level of Service calculations follow Highway Research Board, Circular 212, planning method.

TABLE 4-3
PROJECTS REQUIRED TO
ACHIEVE BUILDOUT SERVICE LEVELS

1. Provide either an eastbound left-turn lane on Clement or left-turn lanes in each direction on Park.
 2. Provide either an eastbound left-turn lane on Buena Vista or left-turn lanes in each direction on Park.
 3. Additional southbound left-turn lane on Main at Pacific may be required.
 4. Re-stripe to provide one eastbound left- and one eastbound through-lane on Central at Webster.
 5. Eighth and Central intersection will be at the physical limit of its capacity. Converting Eighth Street to one-way northbound could improve LOS, but would not completely mitigate.
 6. Restriping to provide left-turn lanes on Central at Grand would allow this intersection to operate at LOS D.
 7. Restriping to make use of all available pavement would allow the intersection of Otis and Westline to operate at LOS D.
 8. To achieve Service Level D operations at Park and Otis would require an additional southbound lane on Park Street. The physical constraints of this location may not permit any increase in capacity.
 9. Computations of Service Level are based on the very generalized estimates of traffic volumes on the 66th Avenue-connector and on the Cross-Airport Roadway.
 - a. Geometrics for Harbor Bay Parkway at Doolittle Drive reflect constraints due to wetlands.
 - b. Non-optimum signal timing at Harbor Bay Parkway at Maitland Drive is assumed due to deliberate efforts to discourage through-traffic on Maitland Drive.
-

- 4.1.d Oppose construction of any auto-oriented bridge, tunnel, or tube crossing of San Francisco Bay (southern crossing) that would connect with Alameda or would be above water level within Alameda.
- One of seven alternative Bay crossings recommended for further study by a report prepared for the Metropolitan Transportation Commission (MTC) would cause unacceptable disruption to Alameda.*
- 4.1.e Minimize vehicle trips to and from Harbor Bay Business Park that must cross the Main Island by providing alternative connections to I-880 Freeway and by applying Transportation Systems Management (TSM) techniques.
- Traffic projections indicate that both measures will be necessary if buildout is to be reached without causing severe congestion.*
- 4.1.f Support construction of a Cross-Airport Roadway if net benefit to Alameda can be demonstrated. The Roadway should begin at a junction with Harbor Bay Parkway south of Maitland Drive and end at I-880 Freeway in the vicinity of 98th Avenue.
- The General Plan Diagram shows an approximate alignment. The City is committed by development agreement with Harbor Bay Isle to support construction if net benefit is demonstrated. Net benefit is not defined, but one component would be reduced environmental impact by traffic in Alameda neighborhoods as compared with a "no project" alternative. The traffic analysis prepared for the General Plan indicates that the project would improve traffic service levels on the Main Island. The Cross-Airport Roadway is eligible for partial funding from Alameda County's half-cent transportation sales tax (Measure B).*
- 4.1.g Support construction of a crossing under San Leandro Bay connecting Harbor Bay Parkway and the 66th Avenue interchange with I-880 Freeway.
- This would provide the most direct access for Harbor Bay Business Park workers and would minimize impacts of the Business Park on Alameda's streets. An inter-agency study (1986) estimated the cost at \$120 million for a tube. The General Plan traffic analysis indicates that it may be possible to construct an at-grade intersection at Harbor Bay Parkway and Doolittle Drive that would operate acceptable, but an interchange may be necessary to avoid*

filling wetlands. More detailed traffic forecasts and cost estimates should be prepared prior to further commitment to this project.

- 4.1.h Plan for a new street connection between Main Street and Mariner Square Loop through the Naval Supply Center in the vicinity of B Avenue.

This route is needed to relieve projected congestion on Atlantic Avenue and to improve access to Alameda Gateway.

Implementing Policies: Street System

- 4.1.i Develop a program to restrict through-traffic on minor streets where it becomes a problem for residents.

Techniques for restricting through-traffic include stop signs, speed limitations and physical alterations such as road narrowing and speed bumps.

- 4.1.j Improve traffic flow on Park Street by prohibiting left turns or providing turn lanes at selected intersections. Conduct a traffic flow study to determine the most appropriate measures.

Loss of some curb parking would be more than compensated by greater convenience for shoppers.

- 4.1.k Study the potential for improving traffic flow by one-way or offset operation of a Webster Street-Eighth Street couplet, preferential signal timing (whether a couplet or not), or by widening Webster Street 4 feet to achieve acceptable minimum widths.

- 4.1.l Design the Cross-Airport Roadway to avoid attracting traffic through the residential neighborhood along Maitland Drive.

An offset intersection or continuous median or other traffic control measures on Harbor Bay Parkway may be needed to prevent 4,000-5,000 cars per day from using Maitland Drive to reach the Cross-Airport Roadway.

- 4.1.m Implement projects listed in Table 4-3 to achieve buildout service levels listed in Table 4-2.

- 4.1.n Evaluate the need for Atlantic Avenue extension to ensure that if the Beltline service were to be terminated, the right-of-way would not be re-used for a purpose other than extension of Atlantic Avenue.

4.2 TRANSPORTATION SYSTEMS MANAGEMENT (TSM)

TSM is a term used to describe programs that reduce the use of single-occupant vehicles during peak travel hours by encouraging or requiring use of alternative travel modes or travel times.

Guiding Policy: Transportation Systems Management

- 4.2.a Recognizing that buildout of the City will result in unacceptable congestion unless 1990 travel habits are altered, Alameda is committed to de-emphasizing use of the single-occupant vehicle (SOV) during peak periods.

Projections of traffic in Table 4-2 show that several intersections would operate at Level of Service E or F if current driving habits were to prevail at buildout in accord with the General Plan.

Implementing Policy: Transportation Systems Management

- 4.2.b Diligently administer the Transportation Systems Management Ordinance adopted in 1990.

Starting from a presumption that all employees are single-occupant vehicle (SOV) users, the ordinance requires a 10 percent reduction in the first year, increasing in steps to 30 percent in the fifth year. The ordinance requires that incentives be offered to employees. If, after 10 years, the objectives are not met, a fee is to be collected for parking at employment centers and redistributed to employees who use non-SOV travel modes.

4.3 TRANSIT

Alameda was developed as a transit-dependent city and had excellent rail and ferry service until the eve of World War II. Currently AC Transit operates nine lines and nearly everyone on the Main Island is within a quarter-mile of a bus stop. The City's relatively high residential density makes better service and a larger share of transit trips feasible.

Guiding Policies: Transit

- 4.3.a Support AC Transit's current (1990) route restructuring plan for local and express bus service.

Additional express and limited service will aid longer trips; articulated buses, small buses, and vans will scale service to demand and street width.

- 4.3.b Encourage AC Transit to maintain a dialogue with Alameda to ensure continued high levels of coverage and transit frequency.

- 4.3.c Support AC Transit's preliminary concept of a light rail line connecting downtown Oakland, BART stations and Oakland Airport with the route passing through Alameda.

A proposed route would be along Webster Street, Central Avenue, Encinal Avenue, Park Street, Otis Drive, Island Drive, Mecartney Road, Harbor Bay Parkway, and the Cross-Airport Roadway.

- 4.3.d Develop transit-oriented streets where feasible.

A transit-oriented street favors buses over automobile traffic by means including signal priority, discouragement of through-traffic, red zones prohibiting parking at bus stops, and curb modification to bring the bus stop to the transit lane rather than requiring buses to move in to the curb. Candidate transit streets include Santa Clara Avenue from Third Street to High Street, Central Avenue from Encinal Avenue to High Street, and Webster Street from Atlantic Avenue to Central Avenue.

- 4.3.e Encourage AC Transit to consider Transit Centers to facilitate transfers at the following locations: South Shore Center, vicinity of Blanding and Broadway, along Webster Street, and at the Alameda Gateway and Harbor Bay Isle ferry terminals.

- 4.3.f Support ferry service as an effective means of reducing demand for greater road capacity, offering commute alternatives, and minimizing pollution.

Ferries making seven round trips from Alameda Gateway to Jack London Square and San Francisco carried 350 to 450 persons (one-way trips) per weekday and 540 on weekends in mid 1990. Ferry service between Harbor Bay Business Park and San Francisco is scheduled to start in July 1991.

- 4.3.g Work with the Metropolitan Transportation Commission to secure and maintain needed subsidies for ferry service from Federal and State highway or transit funds.

- 4.3.h Work toward integrating a Citywide demand responsive shuttle service, which incorporates para-transit, BART, AC Transit, Dial-A-Ride, and shopper needs.

- 4.3.i Seek both technologies and service providers capable of expanding transit use in Alameda.

Technologies may range from light rail to subsidized taxis or vans. Providers could be the City, AC Transit, or for-profit operators stimulated by new demand or subsidies.

4.4 PEDESTRIAN ROUTES

Varied architecture, moderate block sizes, sidewalks, and street trees make Alameda a pleasant place for walkers.

Guiding Policies: Pedestrian Routes

- 4.4.a Ensure that automobile circulation improvements do not degrade the pedestrian environment.

Excessive lane widths, large medians, added turn lanes, wide driveways, and parking lots that do not include designated pedestrian paths create tension for walkers. Addition of medians, curb extensions to the edge of the travel lane at intersections, and similar amenities such as landscaping would improve pedestrian safety and enjoyment, and decrease the amount of time pedestrians must look out for cars.

- 4.4.b Provide space for pedestrian, wheelchair, and bicycle crossing on both sides, if feasible, as part of any modification to bridges providing access to and within the City.
- 4.4.c Identify potential conflicts between bicyclists and pedestrians and develop projects to minimize such conflicts (e.g. BFI Bridge and Shoreline paths).



Shoreline Park on Bay Farm Island has a two-mile path for walkers and joggers.

4.5 BIKEWAYS

Flat terrain, wide streets, and car parking shortages provide ideal conditions to encourage more bike use. (See Figure 4-2, Bikeways/Bay Trail.)

Guiding Policies: Bikeways

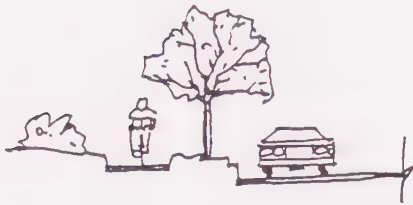
- 4.5.a Provide a system of bike paths, bike lanes, and bike routes that will encourage both commute and recreational cycling.

Figure 4-2, Bikeways/Bay Trail, proposes a bikeways system. See next page for three classes of bikeways.



City of Alameda - **Figure 4-2**
Bikeways/Bay Trail

Bicycle Paths are defined as separate, off-street paths or trails (Class I).



Bicycle Lanes are separated from automobile traffic by a lane marking on the street. Caltrans Design Standards specify a 4-foot minimum paved roadway with a 4-inch stripe separating bicycles and motorized vehicles (Class II).



Bicycle Routes are on-street bikeways designated by sign only (Class III).



- 4.5.b Maintain communication between bike riders and City staff responsible for bikeways design and budgeting to ensure effective use of available funds.
- 4.5.c Encourage transit systems to provide bike transport for commuter and recreational cyclists.
- 4.5.d Consider providing public amenities for bicycle riders such as staging areas with bicycle lockers at transit connections.

Implementing Policies: Bikeways

- 4.5.e Require places of employment to provide ample, safe storage for bikes.
- 4.5.f Prepare a bikeways implementation program that includes priorities and a schedule.
- 4.5.g Publish and distribute a map showing existing and proposed bikeways in Alameda.
- 4.5.h Establish a formal bike committee to update and prioritize projects.
- 4.5.i Provide a separate bicycle facility parallel to the Bay Farm Island Bridge.

4.6 MOVEMENT OF GOODS

A central location in the metropolitan area and excellent, competitive transportation systems have enabled Alameda to retain industrial firms that are significant contributors to economic stability and social diversity.

Guiding Policies: Movement of Goods

- 4.6.a Support the MTC/BCDC Seaport Plan proposals to retain Port Priority Use capability at Encinal Terminals and Alameda Gateway.

Port access is essential to existing Alameda industries. If these port sites were lost, creation of additional ports when needed would cause unnecessary environmental damage to San Francisco Bay.

- 4.6.b Support continued rail service by the Alameda Belt Line.

The Belt Line is an independent railroad owned jointly by the Southern Pacific and Union Pacific railroads. It serves six firms in Alameda: Del Monte, Weyerhaeuser, Alameda Liquid Bulk, Pennzoil, Encinal Terminals and Georgia Pacific.

- 4.6.c Maintain a system of truck routes that enables efficient deliveries with minimum disturbance of residential neighborhoods.

See Figure 4-3, Truck Routes.



City of Alameda - **Figure 4-3**
Truck Routes



City of Alameda

General Plan

5 Open Space and Conservation Element

5 OPEN SPACE AND CONSERVATION ELEMENT

Alameda enjoys a variety of open space resources unique to its island location. The various elements of the City's natural environment -- the land, marshes, tideflats, and Bay waters -- constitute the foundation of the open space system and fulfill multiple open space functions supporting community health, safety, recreation, and preservation of natural resources. Within the built environment, parks and other public facilities provide open space for recreation and sports.

INTEGRATION OF THE OPEN SPACE ELEMENT AND CONSERVATION ELEMENT

In function and content, the Open Space Element and Conservation Element often overlap. The Conservation Element is oriented toward the management of natural resources to prevent waste, destruction or neglect. The Open Space Element, in comparison, emphasizes open space as a land use and requires that preservation and management of natural resources be considered in land use planning and decision-making. This combined Open Space and Conservation Element describes conservation practices within four state-designated types of open space described below, meeting the requirements of both elements. In addition, Alameda's climate and air quality are considered, as is the preservation of the City's historic and archaeologic resources.

STATE CLASSIFICATION OF OPEN SPACE

State law requires that four types of open space be analyzed in the Open Space Element: open space for the preservation of natural resources; open space for the managed production of natural resources; open space for outdoor recreation; and open space for public health and safety. It is the intent of State law that cities preparing general plans recognize open space as a limited and valuable resource to be conserved whenever possible. Any action by the City to acquire, dispose of, or regulate the use of open space lands in any of these categories must be consistent with the Open Space Element.

5.1 OPEN SPACE FOR THE PRESERVATION OF NATURAL RESOURCES

The Bay waters and tidal areas that surround Alameda sustain vital communities of animal and plant life, some listed by Federal agencies as endangered or threatened. Protection of water resources and fragile habitat recognizes the interdependent relationship between human and other living communities. This section considers water resources in three parts: water-related habitat, water quality, and water conservation.

The urban environment also comprises and provides habitat and is considered briefly in a section on urban habitat. Following this discussion is a review of the wildlife and vegetation of both water-related and urban habitat.

WATER-RELATED HABITAT

The San Francisco Bay is the largest estuary along California's coastline, and the estuarine environment of marshlands, mudflats, salt production lands, and open water supports close to 100 species of fish. As an essential portion of the Pacific Flyway, a bird migration route which spans from Canada to Mexico, the Bay supports countless migratory as well as year-round bird species. (See subsequent section on wildlife and vegetation.)

The aquatic and water-related habitat has intrinsic value not only for the individuals of a variety of plant and animal species, but also for humans. Bay Area residents derive many benefits from the Bay, including food, economic gain, recreation, scientific research, education, and aesthetics. In addition, the tidal wetlands serve a vital function in filtering out many of the pollutants in the Bay waters, and aid in buffering land from flooding.

Since the influx of population to California associated with the Gold Rush, filling and construction along the San Francisco Bay have destroyed most of the original bordering marshlands, and remaining wetlands are increasingly valued. The regional loss reflects and contributes to a statewide and national trend toward wetlands loss. The Department of Fish and Game (DFG) estimates that California has lost more than 90 percent of its wetlands; the National Wildlife Federation reports that more than half of the wetlands nationally have been destroyed.

Alameda is fortunate to have some wetlands within and surrounding the City, although repeated filling has moved the tidal wetlands progressively bayward, and the existing wetlands are not in their original, pre-European-settlement location. (See Figure 1-1.) Nonetheless, the Alameda shoreline is part of the once-extensive system of wetlands which ringed the Bay. The

wetlands which border a segment of the South Shore of the Main Island at the Elsie D. Roemer Bird Sanctuary and proposed Bayview Shoreline Preserve are representative of historic tidal wetlands habitat.

Across San Leandro Bay from the Main Island, the Arrowhead Marsh, although not a part of Alameda, is another tidal wetlands and is likely ecologically linked with the wetlands of the Bird Sanctuary and Bayview Shoreline Preserve, the tidal and seasonal wetlands at the Oakland Airport, and the lagoons and sloughs throughout Bay Farm Island and the Island of Alameda. The varied wetlands habitats, as well as associated upland and open water areas, interact to form a larger ecological unit. Bird species, for example, may nest in one type of vegetation, forage or court in another, and rest elsewhere. The reduction, loss, or alteration of one habitat can decrease the abundance and diversity of wildlife in others. Water-related habitat is shown on Figure 5-1, Environmental Resources, and is reviewed briefly in the following paragraphs; habitat includes uplands, sandy areas, open water, mudflats, and eelgrass beds.

Due to the extensive filling which occurred around the perimeter of the original Alameda and Bay Farm islands, no "original" uplands remain of the historic habitat. However, some of the shoreline area functions as uplands habitat associated with wetlands, places where waterfowl and shorebirds can rest and take refuge. The Bayview Shoreline Enhancement Plan, now in draft form, envisions the enhancement of native upland vegetation bordering the wetlands behind homes between Broadway and Ravens Cove. This project would include the development of specific plans to relocate an existing trail, a landscape restoration/enhancement project using native species, and interpretive signs, all in order to improve public access and enjoyment of the shoreline and the quality of the wildlife habitat.

Like uplands, sandy areas such as Crown Memorial State Beach, Alameda Beach, and portions of the Naval Air Station, Oakland Airport, and the Municipal Golf Courses, are used as resting places by birds, and Least Terns are known to court on the beach. In addition, those sandy areas which are tidally inundated may contain seawater puddles in which birds may forage.

The open water surrounding Alameda as well as the mudflats around the South Shore of the Main Island and west of Bay Farm Island also function as significant habitat. The open waters of the Bay provide foraging areas for fish-eating birds, as well as the substrate for the many life forms which live in the water column and on the Bay floor. The organisms which live in the mudflats provide a rich pantry of invertebrate fauna and algal growth.

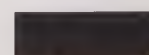


Sources:

Dr. Chris Kitting, Biologist, CSU Hayward, 1990;

Sandy Wyllie Echeverria and Patrick J. Rutten, *Inventory of Eelgrass (Zostera marina L.) in San Francisco/San Pablo Bays*, National Marine Fisheries Service, Southwest Region, October 1989;

LSA, *Biological Report: Harbor Bay Ferry Terminal*, prepared for the City of Alameda, January 1990. Includes Figure 5, Proposed Ferry Approach Route (eelgrass bed locations derived from surveys), and Figure 8, Transect Locations, Pacific Aerial Photo of Ferry Approach Vicinity, June 1989.



Lagoons



Significant Habitat - exists under others' jurisdiction

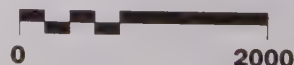


Open Space/Habitat



Eelgrass Beds

Note: Location and configuration are approximate due to fluctuations in growth and methods of measurement.



City of Alameda - **Figure 5-1** **Environmental Resources**

Two separate beds of eelgrass provide distinctive habitat for marine organisms living in the waters off of Alameda. The bed which is southwest of Bay Farm Island is believed to be the richest grass bed left in San Francisco Bay, with respect to the presence of small animals. The grass is long and wide, grows quickly, and dozens of common species are known to be associated with this bed of eelgrass. The endangered Least Terns are known to forage on herring living in and around this eelgrass. The second bed of eelgrass off of Alameda, although shorter and growing in shallower water, probably also provides a nursery for fish species which the Least Terns nesting at the NAS forage. This bed is located off of Crab Cove, the cove which stretches between the arm of Ballena Isle and Crown State Beach. (See Figure 5-1, Environmental Resources.)

WATER QUALITY

San Francisco Bay water quality varies with a measurement site's proximity and exposure to point and non-point sources of pollution. Despite the lack of a coordinated system of measurement, it is known that since the 1950s water quality in the Bay has improved markedly, due in large part to the upgrading of municipal sewage treatment facilities.

Municipal sewage discharges and industrial wastewaters are regulated as point sources by the Regional Water Quality Control Board (RWQCB), while non-point sources include polluted urban runoff from streets and parking lots, erosion from construction sites, pollutants in fresh water inflow, pollutants from toxic waste sites and dumps of all kinds, direct spills of pollutants to the Bay, dredging, and vessel waste discharges.

Monitoring done by the RWQCB has focused primarily on the impacts of point-source pollutants, although a regional monitoring network for water and sediment quality -- to be developed by 1993 -- will also analyze non-point source pollution. Once the network is in place, more water quality information will be available for analysis.

WATER CONSERVATION

As of 1990, the fourth year of lower-than-normal rainfall, the East Bay has reduced its water use to 84 percent of its 1986 levels, the levels which represent the last year of normal rainfall. Since water storage is still 25 percent below normal levels, EBMUD urges customers to continue to conserve.

In addition to conservation measures appropriate for individual households, such as the use of low-flow showerheads, aerating faucets, and smaller-capacity toilets and urinals, the East Bay Municipal Utility District (EBMUD) recommends that existing and new landscaping design incorporate EBMUD's water-conserving Landscape Requirements. In 1988, the City of Alameda Ordinance 2389 added a chapter on Water Conservation to the Municipal Code, specifying landscape design and practices.

A user agreement was signed in June 1990 between EBMUD and the Alameda Municipal Golf Courses for the former to supply reclaimed wastewater from the San Leandro Treatment Plant for irrigation use on parts of the golf courses, as a step towards implementing EBMUD's Alameda Reclamation Project. This measure is intended to conserve drinking water which would otherwise be used in landscape irrigation. Construction of additional treatment facilities to improve the quality of reclaimed wastewater, and to supply the treated water for Alameda median strips (Harbor Bay Parkway and Airport Drive) and other landscaped portions of the City is anticipated over the next several years.

A Reclamation Master Plan, under preparation in 1991, will govern EBMUD's wastewater reclamation program until the year 2000. The Reclamation Master Plan may call for new development within the service area -- including Alameda -- to design irrigation systems to use reclaimed wastewater, where available in an acceptable quality.

URBAN HABITAT

"Urban habitat" refers to those areas of the City which provide a land-based living and feeding environment for birds and mammals. This might include Alameda's parks, street trees, parkway and median-strip landscaping, yard trees, the golf courses, and vacant lots. With nearly 14,000 street and park trees (1990) and an uncounted number of yard trees, the City is set within and framed by an urban forest. The leafy green canopy provides food and shelter for many creatures, and contributes toward a verdant community. Lower-growing shrubs and grasses -- both those planted intentionally, and accidental introductions -- also provide habitat.

The Street Tree Inventory identifies 3,634 vacant street planting sites, and the General Plan identifies the Inventory as a guiding reference document for the development of the urban forest. A statewide California Urban Forest Survey done in 1989 calculated an existing street tree per urban resident ratio of 1:4. The 1990 Alameda ratio is approximately 1:6, although at build-out the ratio is expected to be 1:5, about one street tree for five residents. The number of appropriate street trees for Alameda is based on more than a

statewide ratio, of course, and Section 3, the City Design Element, guides the visual development of the City.



Large trees give Central Avenue stately character.

WILDLIFE AND VEGETATION

The above discussion of habitats sets the stage for a mention of their inhabitants. Habitats function interdependently with their inhabitants. Trees and other vegetation may be viewed as both providing habitat and as dwelling within a larger habitat. This section briefly describes individual species which make up the wetlands and water-related habitat areas, and those species which inhabit the urban portion of Alameda.

Natural terrestrial and shoreline habitats have been drastically modified throughout the City as a result of development. Open water habitats, while less obviously modified, have still been affected. As a result of this habitat modification, the vegetation, insects, fish, birds, and mammals which are present today represent both remnants of a past landscape and more recent introductions, intentional and accidental. Several of the plants or animals described herein are recognized as species of special status, and Alameda is

fortunate to contain unique habitat that supports members of species which are known to be diminishing throughout all or part of their natural ranges.

According to the State Department of Fish and Game, a variety of fish, shrimp, and crab inhabit the waters surrounding Alameda, some of the more common including:

Yellowfin Goby
(*Acanthogobius flavimauus*)

American Shad
(*Alosa sapidissima*)

Speckled Sanddab
(*Citharichthys stigmaeus*)

Shiner Surfperch
(*Cymatogaster aggregata*)

White Croaker
(*Genyonemus lineatus*)

Staghorn Sculpin
(*Leptocottus armatus*)

Bat Ray
(*Myliobatus californicus*)

Starry Flounder
(*Platichthys stellatus*)

Striped Bass
(*Roccus saxatilis*)

Leopard Shark
(*Triakis semifasciata*)

Dungeness Crab
(*Cancer magister*)

Oriental Shrimp
(*Palaemon macrodactylus*)

White Sturgeon
(*Acipenser transmontanus*)

Jacksmelt
(*Atherinopsis californiensis*)

Pacific Herring
(*Clupea harengus*)

Northern Anchovy
(*Engraulis mordax*)

Bay Goby
(*Lepidogobius lepidus*)

Brown Smoothhound
(*Mustelus henlei*)

English Sole
(*Parophrys vetulus*)

Northern Midshipman
(*Porichthys notatus*)

Longfin Smelt
(*Spirinchus thaleichthys*)

Bay Shrimp
(*Crangon* sp.)

Mud Crab
(*Hemigrapsus oregonensis*)

Spider Crab
(*Pyromaia tuberculata*)

California cordgrass (*Spartina foliosa*) is present in the Bayview Shoreline Preserve. This species and the Eelgrass (*Zostera marina*) which grows in several locations off of Alameda and Bay Farm islands are of prime importance to the aquatic and wetlands ecosystems. The endangered California Clapper Rail (*Rallus longirostris obsoletus*) is known to frequent cordgrass areas, including those comprising the Bayview Shoreline Preserve and in the nearby Arrowhead Marsh. The endangered Least Tern nests at the Naval Air Station and Oakland Airport, and forages for Pacific Herring which are found in the eelgrass beds. The Alameda song sparrow (*Melospiza melodia pusillula*), one of several unique sub-species of song sparrow unique to the San Francisco Bay, is listed by the State Department of Fish and Game as a species of special status and was categorized by the Federal Government in 1989 as a Candidate 2, a species which is being considered for listing by the U.S. Fish and Wildlife Service.

The Department of Fish and Game and the local Audubon Society monitor the presence and condition of both water-oriented and land-oriented bird species. According to them, shore-inhabiting birds which have been observed around Alameda include:

Snowy Plover
(*Charadrius alexandrinus nivosus*)

Common Loon
(*Gavia immer*)

California Brown Pelican
(*Pelicanus occidentalis*)

Double-breasted Cormorant
(*Phalacrocorax auritus*)

Harlequin Duck
(*Histrionicus histrionicus*)

Barrow's Goldeneye
(*Bucephala islandica*)

Northern Harrier
(*Circus cyaneus*)

California Black Rail
(*Laterallus jamaicensis*)

California Gull
(*Larus californicus*)

Salt Marsh Yellowthroat
(*Geothlypis trichas sinuosa*)

Elegant Tern
(*Sterna elegans*)

Land birds thought to be present at least occasionally within the City of Alameda and vicinity include the Merlin (*Falco columbarius*), Peregrine Falcon (*Falco peregrinus*), Short-eared Owl (*Asio flammeus*), and Burrowing Owl (*Athene cunicularia*). All of these species are considered to be of

special status: rare, threatened, endangered, or a candidate for such listing. Dozens of more common species are also present.

The Burrowing Owl is of considerable interest locally. This small diurnal owl, which tends to inhabit open country, finds its niche in urban areas where open spaces, such as at airports and vacant lots, resemble that of its natural habitat. Known historically to inhabit ground squirrel burrows on Bay Farm Island, a colony was moved from its natural habitat in the Harbor Bay Isle area to a burrows constructed at the Municipal Golf Courses.

The Salt Marsh Wandering Shrew (*Sorex vagrans halicoetes*), another species of special status, was known to inhabit the Oakland Airport in 1950, and may still be present. However, trapping efforts in 1985 were unsuccessful. A mole which is known only to the Island of Alameda and called, appropriately, the Alameda Island Mole (*Scapanus latimanus parvus*) is to be listed in 1991 by the Department of Fish and Game as a species of special concern. It is unknown where the mole is living at this time. Other animals which might be expected to be present within the landward urban portion of Alameda include field mice, ground squirrels, jack rabbits, opossums, raccoons, and domestic animals, such as dogs and cats.

Common plants found on the golf courses, vacant lots, and parks include such grasses as barley and wild oats, several species of thistle, many species of the mustard family, and a wide variety of shrubs. Unusual plants which may be present include the salt marsh-dwelling Pt. Reyes Bird's Beak (*Cordylanthus maritimus* spp. *palustris*), the flowering aromatic herb Adobe Sanicle (*Sanicula maritima*), and the Monterey Spineflower (*Chorizanthe pungens* var *pungens*).

On residential sites and along the streets, in parks, and on the golf courses, most plants are non-native ornamental shrubs and trees. The Alameda Tree Inventory identifies approximately 12,000 street trees, with the London Plane Tree (*Platanus acerifolia*) constituting 16 percent of the total Alameda urban forest. The Gingko (*Gingko biloba*) is the next most common, making up 9.4 percent. The oldest trees, identifiable by their greater-than-24" diameter, account for about 5 percent of the population, and are dominated by London Plane, Liquidambar (*Liquidambar styraciflua*), and American Elm (*Ulmus americana*).

Guiding Policies: Open Space for the Preservation of Natural Resources

- 5.1.a Preserve and enhance all wetlands and water-related habitat.

Water-related habitat includes open water, Bay bottom, mudflats, uplands, sandy areas, lagoons, and sloughs. Since the various Bay wetlands are linked ecologically, preservation of nearby Arrowhead, Fan, and Damon marshes would aid in the preservation and enhancement of Alameda's wetlands, including those at the Elsie D. Roemer Bird Sanctuary and Bayview Shoreline Preserve.

- 5.1.b Protect Open Space-Habitat areas, including sensitive submerged tidelands areas (mudflats) and eelgrass beds, from intrusions by motorized recreational craft, including jet skis and hovercraft.

- 5.1.c Continue to prohibit filling of water-related habitat except in those limited cases in which a strong public need clearly outweighs the habitat preservation need, and where approval is granted by the appropriate agencies.

- 5.1.d Preserve buffers between wetlands and urban uses.

The California Department of Fish and Game recommends buffers of between 50 and 100 feet, to separate and protect the two land uses. Since Alameda is nearly built out, buffer size may need to be adjusted so that parcels will not be rendered unbuildable by the application of this standard.

- 5.1.e Continue to preserve and maintain all lagoons as habitat as well as visual and compatible-use recreational resources.

Forster's Terns and diving ducks, among other species, use the lagoons for foraging.

- 5.1.f Urge the NAS to promptly clean up toxic materials found on-site.

The Naval Air Station has begun a program to identify the options for the clean-up of the 20 toxic sites under its jurisdiction.

- 5.1.g Support BCDC in their efforts to implement a regional dredging plan.

A recent Assembly Bill would have allowed preparation of a San Francisco Bay Regional Dredging Plan, to address regional needs and outline a strategy for reducing water quality problems caused by contaminants in dredged material, evaluate disposal options, and implement pollutant testing procedures. Although the Bill did not pass, BCDC plans to pursue the objectives of the proposed legislation, and may support reintroduction of the bill, introduction of new legislation, or another solution. An accepted management plan would likely become part of BCDC's Bay Plan and the RWQCB's Basin Plan.

- 5.1.h Continue to support EBMUD in its efforts to promote and implement water conservation measures.

Alameda City government's largest water consumer is the Recreation and Park Department (ARPD), and the ARPD has cut its water use by about 20 percent by eliminating wasteful watering habits and by planting drought-resistant ground cover. The largest consumer of water on the Main Island is the NAS, which was able to cut its consumption by 44 percent between 1986 and 1989, from nearly 100 million gallons to 56 million gallons.

- 5.1.i Encourage the use of drought-resistant landscaping.

- 5.1.j Use the City of Alameda Street Tree Management Plan as the guiding reference when considering action which would affect the trees contained in the urban forest.

After presenting a thorough inventory of the location, composition, condition, and maintenance needs of City-maintained trees, the Street Tree Management Plan presents recommendations for planting and tree maintenance.

Implementing Policies: Open Space for the Preservation of Natural Resources

- 5.1.k Ban the use of jet skis and hovercraft within the Elsie D. Roemer Bird Sanctuary and San Leandro Channel at all times, and San Leandro Bay only during critical bird nesting periods.

The East Bay Regional Park District has contemplated such a move, planning to enforce its ban through the use of police boats or planes.

- 5.1.l Work with local recreation groups to disseminate information regarding the sensitivity of Open Space-Habitat areas to intrusions by motorized craft.

Crab Cove Visitor Center and other local educational resource centers could participate in an information dissemination campaign.

- 5.1.m Post and maintain signs warning boaters and users of motorized craft that they are approaching a wildlife area.

- 5.1.n Inventory existing wetlands and water-related and other habitats to create a comprehensive map of sensitive biological and botanical resources, to better protect these resources.

Figure 5-1, Environmental Resources, is based on a compilation of available sources on wetland and water-related habitat. Public and private organizations are encouraged to conduct field surveys to contribute detail on the extent and importance of these and other potentially unidentified habitat areas.

- 5.1.o Complete the Bayview Shoreline Preserve Improvement Plan.

- 5.1.p Require that proposed projects adjacent to, surrounding, or containing wetlands be subject to a site-specific analysis which will determine the appropriate size and configuration of the buffer zone.

The size and configuration of the buffer zone should be based on the characteristics and importance of the wetlands and the proposed project. The purpose of the buffer zone will be to ensure the long-term viability of the wetlands area, which may include provisions for off-site needs such as upland nesting habitat.

- 5.1.q Work with the East Bay Regional Park District and other appropriate agencies to improve, protect, and preserve Crown Memorial State Beach and the Alameda Beach as habitat as well as recreational resources.

The boundary between Crown Memorial State Beach and Alameda Beach lies at Westline Drive. The presence of people and dogs along the beaches limits beach habitat value for nesting birds, although biologists have observed Least Terns courting on the sand and on offshore buoys at Crown Beach. The ban on allowing dogs to run without leashes should be strictly enforced, for the protection of all, including the dogs.

- 5.1.r Continue to participate in the Alameda County Non-Point Source Task Force.

The Task Force is made up of public works directors or representatives from each city within Alameda County, and is engaged in organizing the implementation of the Non-Point Source Control Program, to ensure continued improvement of Bay water quality. Non-point sources of pollution include polluted urban runoff, construction site erosion, pollutants in fresh water inflow, pollutants from toxic waste sites and dumps, direct spills of pollutants to the Bay, dredging, and vessel waste discharges.

- 5.1.s Participate in the Non-Point Source Control Program (NPSC).

Although not fully designed, the NPSC Program is anticipated to include measures for prevention of contamination and source control of pollutants. Treatment of urban runoff, while potentially effective, is costly, and prevention and source control are the preferred methods of abatement. The main objective of the NPSC Program is to ensure that only storm water enters the storm drains, which will involve eliminating illegal connections and strict surveillance and enforcement of "no dumping" mandates. Educational as well as regulatory strategies are under consideration.

As a part of the NPSC Program, by mid-1991 the City will prepare a report for submittal to the RWQCB, characterizing local pollutant types and amounts, and a plan for implementing a control program.

- 5.1.t Consider adopting City standards in addition to those adopted by the County, to deal with non-point source water pollution problems such as sheet flow storm runoff and sedimentation affecting sensitive water habitats.
- 5.1.u Participate in the County Hazardous Waste program and/or consider establishment of hazardous waste and/or oil disposal or transfer sites.
- The dearth of available hazardous waste and motor oil disposal sites may lead citizens to pour dangerous materials into storm drains. Establishment of such sites allows the City more control over substances which could contaminate the Bay. See also policies contained in the Health and Safety Element.*
- 5.1.v Participate in the identification of agencies responsible for the cleanup of toxic materials within the Oakland Estuary, and support them in their efforts.
- 5.1.w Require new marinas and encourage existing marinas to provide easily accessible waste disposal facilities for sewage and bilge and engine oil residues.
- 5.1.x Prevent migration of runoff off-site or into wetlands areas and water-related habitat by requiring that proposed projects include design features ensuring detention of sediment and contaminants.
- Project design should specify techniques to be used to detain runoff. On-site inspection during construction may be necessary to ensure that designs are realized.*
- 5.1.y Work with EBMUD to implement the Alameda Reclamation Project.
- The Alameda Reclamation Project anticipates the increased use of reclaimed wastewater for landscape irrigation throughout the City.*
- 5.1.z Develop a comprehensive City Water Conservation Ordinance that recognizes Alameda's unique climate, soil conditions, and development patterns.
- 5.1.aa Review proposed development projects for both water and energy efficiency, and integrate plans for the use of reclaimed wastewater for landscaping as a condition of approval.

- 5.1.bb Require a biological assessment of any proposed project site where species or the habitat of species defined as sensitive or special status by the California Department of Fish and Game or the U.S. Fish and Wildlife Service might be present.

Listings of sensitive and special status species change from year to year, but might include birds, animals, and plants such as the California Least Tern, California Clapper Rail, Burrowing Owl, Alameda Island Mole, Salt Marsh Wandering Shrew, Adobe Sanicle, Pt. Reyes Bird's Beak, and Monterey Spineflower.

- 5.1.cc Implement the City's Street Tree Management goal of planting trees in all vacant street tree sites within 10 years.

5.2 OPEN SPACE FOR THE MANAGED PRODUCTION OF RESOURCES

This section of the Open Space Element is required to address the commercial value and use of open space lands. The General Plan does not designate any land as Open Space for the Managed Production of Resources, but does recognize the function of Bay waters and vegetation as fish nurseries, some of which may be of value to commercial fishing production. A discussion of the more common fish, shrimp, and crab species is found in Section 5.1.

Guiding Policies: Open Space for the Managed Production of Resources

- 5.2.a Protect and preserve Bay waters and vegetation as nurseries and spawning grounds for fish and other aquatic species, both as a part of habitat preservation and to encourage continued use of the Bay for commercial fishing production.

Implementing policies ensuring protection and preservation of Bay waters and vegetation may be found in Section 5.1.

- 5.2.b Explore interest in public and privately owned sites available for community gardens.

5.3 OPEN SPACE FOR OUTDOOR RECREATION

The General Plan discusses the need to maintain and expand the City's inventory of parks and recreation facilities. Text and policies reviewing the value of open space for outdoor recreation are found in Section 6, the Parks and Recreation, Shoreline Access & Development, Schools and Cultural Facilities Element.

5.4 OPEN SPACE FOR PUBLIC HEALTH AND SAFETY

The proximity of the Naval Air Station and Metropolitan Oakland International Airport requires the establishment of safety zones for landing aircraft. Text and policies pertaining to safety zones are found in Section 7, the Airports Element. Policies specifying the preservation of unbuilt areas within flood plains subject to the 100-year flood are listed in the Health & Safety Element, within Section 8.3.

5.5 CLIMATE AND AIR QUALITY

Alameda is normally exposed to an influx of marine air from the west, having a climate which is cool and wet in the winter and relatively cool in the summer, with fog or wind. The high-pressure cell which lies over the Pacific Ocean contributes to the dryer air in summer, and its movement to the south during the winter exposes the Bay Area to wet weather.

Like all Bay Area cities, Alameda experiences both the general Bay Area climate and air quality, and the local variations on these patterns caused by specific location and topography. Some interior sections of Alameda are warmer than the maritime norm, and are more sheltered from the winds. Similarly, locations toward the outer edges of Alameda and Bay Farm islands experience the force of the winds more directly. Early travelers' historical accounts of the City often commented on Alameda's relatively fog-free climate, particularly in contrast to San Francisco.

The constant flow of relatively clean air through the Golden Gate results in good air quality compared with other parts of the Bay Area. There is no air quality measurement instrumentation in Alameda, however, and the closest sampling stations are in Oakland and San Leandro. These stations, both of which measure ozone and one of which (Oakland) measures carbon monoxide levels, indicate few days exceeding State or Federal air quality standards in recent years. (See Table 5-1.)

TABLE 5-1
AIR POLLUTION AT THE BAAQMD's
OAKLAND AND SAN LEANDRO STATIONS 1987 AND 1988;
and AMBIENT AIR QUALITY STANDARDS

	O ₃ Days			CO	
	MA	NTL	CA	MA	Days NTL
1987 (Oakland)	9	0	0	4.9	0
1987 (San Leandro)	9	0	0	--	--
1988 (Oakland)	10	0	1	6.0	0
1988 (San Leandro)	8	0	0	--	--
Averaging Time	1 hour			8 hours	
California Ambient Air Quality Standards	9			9	
Federal Ambient Air Quality Standards	12			9	

Notes: MA = Maximum Average Value

"Days" columns give the number of days per year on which an air quality standard was exceeded, either nationally (NTL) or within California (CA).

O₃ (ozone) is measured in pphm (parts per hundred million).

CO (carbon monoxide) is measured in ppm (parts per million).

These monitoring stations do not measure Nitrogen Dioxide, Sulfur Dioxide, or Total Suspended Particulates.

Source: Bay Area Air Quality Management District (BAAQMD) Meteorology and Data Analysis Section.

Although the data from these two stations usually are generalized to include Alameda, the City's position between the Naval Air Station airport and the Metropolitan Oakland International Airport raises a question as to whether proximity to airports increases air pollution. In a 1971 study by the Bay Area Air Pollution Control District, the Oakland Airport was judged to possess marginal pollution potential for the vicinity, and Naval Air Station activity was anticipated to lead to occasional episodes of increased pollutant levels. No current study of this issue is underway.

The computer model URBEMIS #2, developed by the California Air Resources Board, projects the following changes in the amounts of the three most important contaminant gases, when buildout is reached within Alameda:

Carbon Monoxide (CO):	23% decrease
Nitrogen Dioxide (NO ₂):	9.4% decrease
Reactive Organic Gases:	5% decrease

The decreases are due to projected increases in automobile engine efficiency built into the model. It should be noted that this model is based on numerous assumptions regarding trip patterns, which are in turn based on population and land use projections. If any of these patterns change between the base year (1990) and the buildout year (assumed to be 2010), then actual production of contaminants may differ significantly from the projections.

The URBEMIS #2 model does not include emissions projections for the Oakland Airport, nor for NAS Alameda. The NAS was identified in 1987 by BAAQMD as a major point source of air pollution in the Bay Area; it produces measurable amounts of carbon monoxide, nitrogen dioxide, sulfur dioxide, total organic gases, and particulate matter.

The URBEMIS #2 model also does not take into account the potential air quality problems associated with the methane gas produced at the former sanitary landfill on Bay Farm Island. The City has engaged a private contractor to siphon or "bleed off" methane gas, which is produced as a by-product of decomposing materials at Mt. Trashmore. The process is expected to last at least six to 10 years (until perhaps the year 2000), by which time the amount of gas produced is expected to have diminished.

Regionally, the most severe and complex air quality problem is the relatively high level of ambient ozone experienced during inversions in summer and fall. Ozone is not emitted directly into the atmosphere, but is produced in the atmosphere through a complex series of photochemical reactions involving hydrocarbons, nitrogen oxides, and sunlight. No single source accounts for most

of the hydrocarbon and nitrogen oxide emissions, and many sources are spread throughout the region.

Because so much of the Bay Area's air pollution problem is attributable to motor vehicles, improving transportation facilities to reduce vehicle hours of travel will improve air quality. (See Section 4.2, Transportation Element, on Transportation Systems Management.)

Guiding Policies: Climate and Air Quality

- 5.5.a Strive to meet all Federal and State standards for ambient air quality.

Table 5-1 lists the air quality standards for all significant contaminant gases. These standards are subject to change, and in fact have changed since 1975.

- 5.5.b Support continued monitoring efforts by the Bay Area Air Quality Management District.

Implementing Policies: Climate and Air Quality

- 5.5.c Encourage use of public transit for all types of trips.

See policies in Section 4.3 in the Transportation Element.

- 5.5.d Encourage development and implementation of Transportation System Management (TSM) programs.

See Transportation Element policies (4.2.a and 4.2.b).

- 5.5.e Minimize commuting by balancing jobs and nearby housing opportunities.

Buildout of Alameda will create four jobs for every three employed residents, minimizing out-commuting. A surplus of jobs in Alameda is likely to result in less travel than if these office/business park jobs were at alternative outlying locations.

5.6 HISTORIC AND ARCHAEOLOGIC RESOURCES

Alameda's history and prehistory are reflected throughout the City in the pattern and names of streets, the placement and style of homes and businesses, and in commemorative markers posted in public places. Alamedans are well aware of the recent history of their community, as is evidenced in the existence of such groups as the Alameda Victorian Preservation Society, formed in 1972. The group is dedicated to preserving the historic character of the City, increasing awareness and appreciation of Alameda's historic roots, and providing historic building restoration and rehabilitation information to citizens.

The creation of a Historical Advisory Board, the City's identification of historic districts and Heritage Areas, and efforts to revitalize older, historic business districts through participation in the Main Street Project all indicate Alameda's continuing commitment to celebrating the Island's past. In addition, the City adopted an optional Historic Preservation Element in 1980 with two major goals: nurturing an understanding and appreciation of the City's history and architecture, and the preservation of Alameda's historical and architectural resources. The policies in this section are intended to supplement the Element's recommendations for an education and preservation program.

Prehistoric Period. The Coastal Miwoks lived within the protection of the oak forest that blanketed the Encinal peninsula, a peninsula fringed on its northern and eastern shores with cordgrass and pickleweed marsh. It later became the Island of Alameda. Until the early 1900s, at least a half-dozen huge shellfish mounds punctuated the landscape, refuse heaps whose contents attested to the hunting, fishing, and gathering way of life of the earliest inhabitants. When excavated, the largest mound, 400 feet long by 150 feet wide by 14 feet high and encompassing an area bounded by Central Avenue, Court Street, Johnson Avenue, and Gibbons Drive, was found to cover burial grounds. In 1908 the contents of this mound were hauled to Bay Farm Island and used for paving and filling material. Mound Street passes through the original shellmound location, and additional artifacts lie buried beneath the urban hardscape.

The California Archaeological Inventory reports that with only 5 percent of the General Plan Project Area surveyed, seven prehistoric archaeological sites have been identified, and there is a high probability of additional resources in unsurveyed areas. Policies within this section anticipate future finds. The types of artifacts which might be expected to be found are those typical of Bay Area settlements near existing or former marshland, including mortars and pestles, obsidian knives, weapons, or projectile points, and bone needles or other small tools. Obsidian, chert and

other stone with which the tools and the weapons were composed is not native to Alameda, suggesting Coastal Miwoks had trade connections with mainland or inland tribes. Other prehistoric resources that could be discovered within Alameda might include dark, crumbly soil containing shell and bone dietary debris, heat-affected rock, or human burials.

Historic Period. European settlement began in the late 1700s with the arrival of the Spanish, initiating a period of land appropriation and subdivision which ultimately displaced Alameda's earliest inhabitants. By the late 1800s, settlement existed at three disparate locations on the peninsula, with a main road (now Central Avenue) and a railroad line linking the settlers. The large-scale transformation of the landscape was already taking place, with some wetlands being diked and filled, and the initiation of a Federal government project which would take nearly 30 years to complete: the dredging of a Tidal Canal between the peninsula and the mainland, severing Alameda from the shore.

The California Gold Rush brought a huge influx of population to the Bay Area in the mid-1800s. Among these settlers were several entrepreneurs who would subdivide the peninsula and sell tracts for residences and orchards. The pace of settlement within Alameda remained steady during the last three decades of the century as rail and ferry projects connected Alamedans to one another, to the rest of the Bay Area, and, indeed, to the rest of the country. The corner of Lincoln and Webster streets is noted for being the location of the terminus of the first transcontinental railroad; a Central Pacific train completed a cross-continental journey for the first time in 1869. The late 1800s also left their mark within the City in the form of the Victorian homes which may be seen throughout Alameda.

The California Archaeological Inventory notes that the City contains many properties of recognized historic value. The National Register of Historic Places lists 10 properties, the California Inventory of Historic Places lists five properties, and California Historical Landmarks lists one property. A historic resources inventory conducted in 1979-1980 resulted in the identification of 663 historic properties. A more recent survey suggests as many as 4,000 properties with historic value.

The early settlement date of this area and the prevalence of properties of historic value strongly suggest the existence of additional unidentified historic resources, both archaeological and architectural. Historic archaeological resources which might be expected include stone or adobe foundations or walls, structures and remains with square nails, and refuse deposits, often found in old wells or privies.

Guiding Policy: Historic and Archaeologic Resources

- 5.6.a Protect historic sites and archaeologic resources for their aesthetic, scientific, educational, and cultural values.

Historic preservation programs, such as the measures proposed within the 1980 Historic Preservation Element, have been successful in preserving the small-town character of many California communities. See Section 3.3, Architectural Resources, for additional policies.

Implementing Policies: Historic and Archaeologic Resources

- 5.6.b Working in conjunction with the California Archaeological Inventory, review proposed development projects to determine whether the site contains known prehistoric or historic cultural resources and/or to determine the potential for discovery of additional cultural resources.

- 5.6.c Require that areas found to contain significant historic or prehistoric archaeological artifacts be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation.

The California Environmental Quality Act (CEQA) requires evaluation of any archaeological resource on the site of a development project. Unique resources, as defined by State law, should be protected, either by physical measures or by locating development away from the site. A preferred preservation method involves covering a site with earth fill for potential future, leisurely excavation; immediate excavation by qualified archaeologists should be undertaken only if such protection is infeasible.

- 5.6.d Update the Historic Preservation Element when funds allow.



City of Alameda

***General
Plan***

***6 Parks and Recreation,
Shoreline Access, Schools
and Cultural Facilities Element***

6 PARKS AND RECREATION, SHORELINE ACCESS, SCHOOLS AND CULTURAL FACILITIES ELEMENT

This element establishes policies for facilities that deserve more attention than they would receive if they were included in the Land Use or Open Space elements. Parks are especially valued in Alameda because existing acreage is small relative to population, and opportunities for expansion of the park system are few. Improved shoreline access has accompanied recent development, and additional opportunities to take advantage of the island setting are available. Acquisition of the site for the new Main Library and support for an arts center demonstrate interest in enriching the cultural life of Alameda.



Four community parks provide large, green spaces in a densely-built city.

6.1 PARKS AND RECREATION

Five categories of park and recreational open space exist in Alameda:

Neighborhood Parks are mainly for the use of elementary school age children, but also provide landscaped settings for picnicking or passive use by all ages, and greenery in a dense city. The City's dozen existing neighborhood parks range from 1 to 5 acres.

Community Parks have adult facilities such as lighted baseball diamonds and tennis courts, but also function as neighborhood parks. The four community parks range from 6 to 15 acres.

Community open space consists of special purpose facilities such as the Model Airplane Field (1 acre) and the Shoreline Park on Bay Farm Island (22 acres).

Greenways are landscaped linear open spaces with paths for walking, jogging, and biking. On Bay Farm Island they are owned and maintained by homeowners' associations; the General Plan proposes a City-owned greenway on the Main Island.



Alameda Municipal Golf Courses are among the most popular in the Bay Area.

Region-serving Park and Recreation Facilities include Crown Memorial Beach and the Alameda Municipal Golf Courses.

Table 6-1 presents an inventory of existing parks and open space, and Table 6-2 lists five additional sites proposed by the General Plan. Existing and projected park acreage per 1,000 residents appears in Table 6-3. Figure 6-1 shows parks and recreation facilities.

California cities typically strive to meet standards calling for 3 to 6 or more acres of neighborhood and community park space per 1,000 residents, but this range is beyond reach at this stage of Alameda's development. The 1979 CLUP called for 4 acres in newly developed areas, a standard that will be met on Bay Farm Island if school open space is included in the calculation. Counting school open space (Table 6-5) and not counting group quarters population, a majority of which is housed in Alameda Naval Air Station bachelor quarters, there are 2.0 acres of community and neighborhood park space per 1,000 residents in 1990. The proposed parks listed in Table 6-2 will raise the standard to 2.3 acres per 1,000 at buildout.

About 95 percent of Alameda's children live within 3/8 mile of a park, the maximum radius for effective service as indicated by studies in other cities. The 1979 CLUP prescribed a quarter-mile service radius for Alameda, a standard that is not met on Bay Farm Island or in several Main Island neighborhoods.

EAST BAY REGIONAL PARK DISTRICT

Robert W. Crown Memorial State Beach is a regional shoreline jointly maintained by the City and the East Bay Regional Parks District. EBRPD is responsible for management, including planning and policy development. Heavy use during warm weather causes severe congestion in the adjoining South Shore neighborhood. During revision of the General Plan, street modifications that would limit use of Shore Line Drive were considered, but were rejected in favor of less drastic traffic controls, such as diversion during peak periods, that need not be a part of the General Plan.

San Leandro Bay Regional Shoreline, adjoining Alameda's East End, includes both public recreation and habitat preservation areas. The Shoreline is contiguous to the City's former trash disposal facility (affectionately known as Mt. Trashmore) on Doolittle Drive. EBRPD's plans encourage integration of any future development of Alameda's San Leandro Bay shoreline with the District's park and trail system.

TABLE 6-1
EXISTING PARKS AND OPEN SPACE, 1990

Type/Name	Acres	Planning Sector	Status(a)
Neighborhood Parks			
Buena Vista	3.6	West Central	D
Franklin	3.0	West Central	D
Godfrey	5.4	Bay Farm Island	D
Jackson	2.3	East End	D
Longfellow	1.1	West End	D
McKinley	1.2	East Central	D
Neptune	3.5	West Central	U
Parrott Mini-Park(b)	0.2	West Central	D
Rittler	4.8	South Shore	D
Tillman	3.5	Bay Farm Island	D
Woodstock	4.2	West End	D
Subtotal	32.7		
Community Parks			
Leydecker	6.3	Bay Farm Island	D
Lincoln	7.8	East End	D
Krusi	7.9	East End	D
Washington	15.0	West Central	D
Subtotal	37.0		
Community Open Space			
Boat Launches (c)	3.5	West End, Estuary	D
Bridgeview	1.5	East End	U
Harrington Soccer Field (d)	2.0	Bay Farm Island	U
Model Airplane Field	1.3	Bay Farm Island	D
Portola Triangle	2.3	South Shore	D
Shoreline	22.0	Bay Farm Island	D/U
Subtotal	32.6		
Regional Park/Recreation Facility			
Crown Memorial Beach	80.0	South Shore	D
Municipal Golf Course	350.0	Bay Farm Island	D
Subtotal	430.0		
TOTAL	532.3		

Notes: See Table 6-5 for school open space.

(a) D = developed, U = undeveloped, D/U = partially developed.

(b) Alameda Housing Authority park.

(c) Encinal = approximately 2 acres; Grand Street = approximately 1.5 acres.

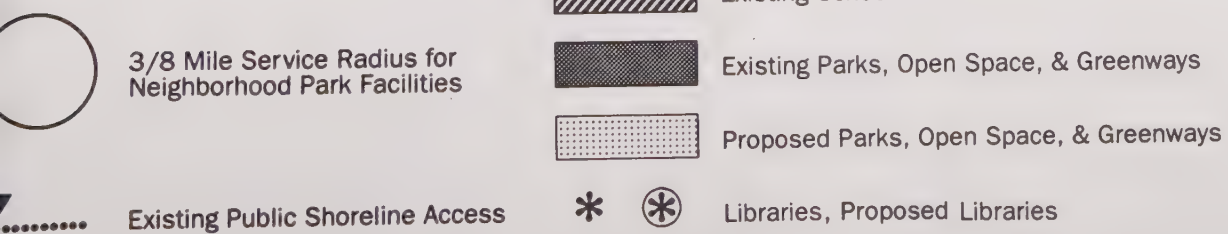
(d) Previously Oleander Park.

TABLE 6-2
PROPOSED PARKS AND OPEN SPACE
1990-2010

Name	Acres	Planning Subarea	Type
Mt. Trashmore	20.0	Bay Farm Island	Community Park
Estuary Park	10.0	East Central	Community Park
Ballena Isle	6.5	West End	Community Park
Greenways (Railroad right-of-way)	15.0	West End	Greenway
Park Street Pocket	0.5	Park Street	Community Open Space
Total	52.0		

TABLE 6-3
PARK ACREAGE PER 1,000 HOUSEHOLD RESIDENTS:
1990 and BUILDOUT

	Year 1990	Increment (Proposed)	Year 2010
Neighborhood Parks	32.7	0.0	32.7
Community Parks	37.0	36.5	73.5
School Open Space (Table 6-5)	70.0	0.0	70.0
Total	139.7	52.0	176.2
Household Population	69,200		76,400
Acres/1,000 Household Residents	2.0		2.3



City of Alameda - **Figure 6-1**
Parks, Recreation, Schools
& Cultural Facilities

Guiding Policies: Parks and Recreation

- 6.1.a Expand Alameda's park system.
- 6.1.b Continue cooperation with the Alameda Unified School District to achieve optimum joint use of limited school open space and park space.
- 6.1.c Pursue park and open space grant opportunities and cooperative agreements with local, regional, and state agencies for expansion of the City's park and open space system.
- 6.1.d Promote the development and retention of private open space to compensate for the shortage of public open space.

Implementing Policies: Parks and Recreation

- 6.1.e Acquire and develop an Estuary Park of 10 or more acres.

The General Plan Diagram indicates a park along 1,400 feet of Estuary frontage west of Oak Street in Specified Mixed Use Area 5. This park will require a major funding commitment by the City, but will probably do more than any other single project to ensure Alameda's long-term quality. It could have the character of San Francisco's Marina Green and would attract all age groups to enjoy large and small boats on the Estuary, views of the Oakland skyline and hills, and active sports. The new park would serve a sector of the City that is short of park space, and would guarantee the high quality of housing proposed for the area.

- 6.1.f Require development and maintenance of approximately 7 acres on Ballena Isle for public park and shoreline access use as a condition of approval of development of the remainder of the island.

Ballena Isle is owned by the City of Alameda and is leased to a private party until 2029. The 1979 CLUP designated the area west of Ballena Boulevard as open space; an adjoining half-acre is used by the public for fishing and viewing. No alternative site appears suitable for expansion of park land to serve the West End.



Basketball in Lincoln Park

- 6.1.g Prepare a park plan for Mt. Trashmore when environmental conditions indicate that development could occur.

There were no restrictions in 1953 when the City placed log booms in the water to contain waste and began dumping. Since reclamation began, methane gas emission and settling indicate that extensive environmental analysis will be required, and development probably cannot occur before 2000.

- 6.1.h Develop a greenway on former railroad right-of-way east of Main Street north of Atlantic Avenue, and on the south side of Atlantic Avenue extending east to Sherman Street.

Long an eyesore, the 100-foot-wide strip west of Webster Street contains an underground utilities right-of-way that prevents building construction. Between Webster and Sherman, the greenway would occupy a portion of the Alameda Beltline Railroad yard, and could provide a buffer between residential and business park uses. The amount of land available for the buffer will depend on how much railroad yard space must be retained. The greenway should include a tree belt and paths for walking, running, and biking.

- 6.1.i Develop a pocket park serving the Park Street Business District and the Civic Center.

A half-acre with trees, benches, restrooms, and possibly a refreshment concession would be popular with Park Street shoppers and office workers. The pocket park could be within the Civic Center Specific Plan area or could be provided in conjunction with development of parking structures.

6.2 SHORELINE ACCESS AND DEVELOPMENT

Boating, fishing, and hiking are important uses of the shoreline that are not covered under the Conservation or Parks and Recreation headings.

Public boat launches and fishing piers exist on Navy land to the west of Encinal High School (2 acres) and at the foot of Grand Street (1.5 acres). The Bay Conservation and Development Commission (BCDC), which has regulatory jurisdiction 100 feet inland from the line of highest tidal action, has required construction of shoreline paths along Mariner Square, Marina Village, Park Street Landing, north of the Aeolian Yacht Club and adjacent to the Fruitvale Bridge as conditions of approval of development projects. Public right-of-way extends to the shoreline at 21 additional access points, which are indicated on Figure 6-1.

MARINAS

Small boats have replaced large ships along most of the Northern Waterfront, as former shipyards and docks have become sites for marinas. The citywide total of 3,124 berths in 11 marinas, designated as commercial recreation on the General Plan Diagram, is the largest concentration in Northern California. With completion of Grand Marina in 1988 (362 berths), little space remains within the U.S. Pierhead Line for additional berths.

Scores of marina-related businesses -- from small shipyards and woodworkers to yacht brokers and manufacturers of navigational instruments -- constitute a thriving sector of the City's economy that has attained a critical mass and can expect continuing growth.

BAY TRAIL

ABAG is the lead agency for planning and implementation of a plan to create a continuous public access corridor around San Francisco Bay, following the shoreline as closely as possible. The trail is to circle the Alameda

portion of Bay Farm Island and the Main Island, except for the Naval Air Station, as shown in Figure 4-2. Most of the trail would consist of existing paths or sidewalks. New multipurpose paths are planned along San Leandro Bay at Mt. Trashmore and following former railroad rights-of-way in the West End. (See Policy 6.1.h.) A ten-foot-wide bike facility would be provided along the east side of the Bay Farm Island Bridge.

Guiding Policies: Shoreline Access and Development

- 6.2.a Maximize visual and physical access to the shoreline and to open water.

Despite recent progress in securing public access, opportunities are still very limited on the north and east shorelines of the Main Island. At marinas where access to the shoreline is available, long floating piers and a clustering of masts still may block visual access to open water. Along much of the Northern Waterfront where there are no marinas, the bulkhead and pierhead lines are close together, so access to open water is assured.

- 6.2.b Regulate development on City-owned shoreline property to maximize public use opportunities.

Although the City's shoreline properties are under long-term lease, existing terms are sufficiently favorable to the leaseholders to enable development to include substantial public amenities and still be profitable. Unless the City regains full control of its shoreline holdings, this policy appears to be the best available response to the CLUP policy calling for stopping the trend toward private use of publicly owned shoreline.

- 6.2.c Ensure marina operating standards that prevent degradation of water quality.

See also policies within Section 5.1 of the Open Space and Conservation Element.

- 6.2.d Through design review of shoreline property, give consideration to views from the water.

Implementing Policies: Shoreline Access and Development

- 6.2.e Remove impediments to enjoyment of shoreline access where legal access exists.

Access points that are intentionally blocked or merely allowed to become overgrown prevent public use of public property.

- 6.2.f Cooperate with property owners adjoining shoreline access points to ensure that public use does not cause unnecessary loss of privacy or unwarranted nuisance.

- 6.2.g Prepare a Shoreline Access Plan in consultation with BCDC for areas where development proposals are expected to provide opportunities to improve or extend access.



Pathway overlooking San Leandro Bay

- 6.2.h Require shoreline access where appropriate as a condition of development approval regardless of whether development occurs within the area of BCDC regulation.

Access should be provided even if there is no development within 100 feet of the water's edge.

- 6.2.i Require off-site access as a mitigation when public access on-site is infeasible.

- 6.2.j Coordinate efforts with the School District in obtaining shoreline access at Paden School, Lincoln School, and Encinal High School.
- 6.2.k In cooperation with the U.S. Coast Guard and governmental agencies concerned with water quality, continue to maintain strict monitoring of compliance with environmental regulations by boat users.

See policies within Section 5.1 of the Open Space and Conservation Element.

- 6.2.l Seek grants for improvement of Bay Trail segments.

Coordination of implementation efforts will be handled by the City of Alameda Department of Public Works and the local advisory group to the Bay Trail Project for the East Bay Region.

6.3 SCHOOLS

Alameda Unified School District (AUSD) operates nine elementary schools (grades K-5), three middle schools (grades 6-8), two high schools and a continuation high school (grades 9-12). As in most California school districts, enrollment grew faster than district population during the 1980s. AUSD projections for 1990-1997 anticipate a 28-percent enrollment increase, three quarters of which will be in grades 6 through 12. Re-opening Paden School and completion of the new Bay Farm Island school will provide more than enough capacity in grades K-5, and only moderate capacity increases will be needed in grades 6-12. Table 6-4 presents enrollment data.

In 1989 Alameda voters approved \$47.7 million in bonds for school rehabilitation and seismic upgrading. Historic Alameda High School, long unavailable for school use because it did not meet seismic standards, will be upgraded, and Encinal High School will be expanded and refurbished. Other schools will be rehabilitated, and day care facilities will be provided at all K-5 schools.

Buildout in accord with the General Plan will increase household population by 10 percent above the 1990 level. Enrollment cycles can vary significantly over 20 years, making attempts at projection potentially misleading. It appears that sufficient capacity could be added on existing sites by shifting grade groupings or by opening closed schools.

TABLE 6-4
ALAMEDA UNIFIED SCHOOL DISTRICT:
EXISTING AND PROJECTED ENROLLMENT 1990-1997

School/Grade	Enrollment (Jan. 1990)	Permanent Capacity (Jan. 1990)	Projected Enrollment (1997)	Percent Change (1990-1997)
Earhart/K-5	645	550	484	
Edison/K-5	367	420	356	
Haight/K-5	540	532	500	
Longfellow/K-5	538	504	500	
Lum/K-5	482	504	500	
Miller/K-5	467	532	500	
Otis/K-5	431	504	356	
Paden/K-5	0	500	500	
New Bay Farm Island/K-5 ¹	0	550	484	
Washington/K-5	454	500	500	
Woodstock/K-5	583	560	500	
Subtotal	4,507	5,656	5,180	15%
Chipman/6-8	575	650	845	
Lincoln/6-8	622	650	840	
Wood/6-8	625	800	750	
Subtotal	1,822	2,100	2,435	34%
Alameda High School	1,232	1,700	1,700	
Encinal High School	1,045	1,550	1,700	
Island High School	137	200	200	
Subtotal	2,414	3,450	3,600	49%
TOTAL	8,743	11,206	11,215	28%

Note: ¹Also known as Village 4 School.
Source: Alameda Unified School District, July 1990.

The College of Alameda, a unit of the Peralta Community College District, has space on its site to accommodate expanded enrollment. Eleven private primary and secondary schools enrolled 1,336 students in 1990.

Most of Alameda's school sites reflect 19th-century urban school standards. Only Encinal, Wood, Lincoln, Earhart and the new Bay Farm Island school have acreage that approaches post-World War II standards. The rest have small playgrounds, minimal athletic facilities and lack greenery. Nevertheless, schools provide important open space play areas for neighborhoods, as discussed in Section 6.1, above; those areas are counted towards meeting the City's parks standard. (See Table 6-3.) Table 6-5 provides an inventory of acreage for school sites and school open space.

Guiding Policies: Schools

- 6.3.a Support and cooperate with the Alameda Unified School District in its efforts that extend beyond classroom education, including:
- o Making open space and recreation facilities available for community use;
 - o Offering and providing space for child care; and
 - o Contributing to the visual quality of Alameda and attitude of students toward their environment through the architecture, landscape treatment, and maintenance of the district's schools.
- 6.3.b Support the Alameda Unified School District efforts to obtain school impact fees needed to maintain adequate educational facilities to serve enrollment generated by new development in the City.

Implementing Policy: Schools

- 6.3.c Approval of residential, commercial and industrial development may be conditioned upon the mitigation of the impact of such development on the Alameda Unified School District.

TABLE 6-5
SCHOOL OPEN SPACE, 1990

School/Grade	Total Campus Size (acres)	Open Space (acres)	Description of School Open Space Facilities	Adjacent City Park	(acres)
Alameda Unified School District					
Earhart/K-5	8.7	5.0	Playfields		
Edison/K-5	3.2	1.4	Paved schoolyard, landscaping		
Haight/K-5	3.8	0.9	Paved schoolyard, playfield		
Longfellow/K-5	2.8	1.0	Paved schoolyard	Longfellow	1.1
Lum/K-5	4.2	1.7	Paved schoolyard, landscaping	Rittler	4.8
Miller/K-5	5.0	2.9	Paved schoolyard		
Otis/K-5	3.6	2.8	Paved schoolyard	Krusi	7.9
Paden/K-5 ^a	4.2	3.7	Paved schoolyard		
New Bay Farm Island	8.0	4.0	Paved schoolyard, landscaping	Tillman	3.5
Washington/K-5	2.6	1.4	Paved schoolyard		
Woodstock/K-5	5.3	2.5	Paved schoolyard	Woodstock	4.2
Franklin ^b	1.2	0.4	Paved schoolyard		
Subtotal	52.7	27.7			
Chipman/6-8	4.0	3.2	Paved schoolyard	Woodstock	4.2
Lincoln/6-8	12.0	2.7	Paved schoolyard, playfield		
Wood/6-8	10.1	4.5	Schoolyard, track, playfields	Rittler	4.8
Subtotal	26.1	10.4			
Alameda High	6.6	1.8	Schoolyard, landscaping		
Thompson Field	0	2.3	Playfields	McKinley	1.2
Encinal High	23.3	9.0	Extensive athletic facilities		
Island High	0.8	0.6	Paved schoolyard		
Subtotal	30.7	13.7			
Peralta Community College District					
College of Alameda	62.0	19.2			
Total	171.4	71.0			

Notes: ^aPaden School, used as an adult school, will be reopened as an elementary school.
^bFranklin School is leased to Carden Redwood School (private) until 1992-93.

6.4 CULTURAL FACILITIES

ALAMEDA FREE LIBRARY

The Alameda Free Library, the fourth oldest public library in California, has three branches: the Main Library at Santa Clara Avenue and Oak Street, the West End Branch Library on Santa Clara Avenue at Eighth Street, and the Bay Farm Island Branch on Mecartney Road adjacent to Leydecker Park. A Children's Library, known at its completion in 1926 as the Boys and Girls Library, occupies a remodeled historic house behind the Main Library. Figure 6-1 shows library locations.

In 1986, a study of space needs confirmed the critical problems of the 1903 Main Library. In 1987, the City Council, upon recommendation of the Library Board, approved future construction of a new Main Library building, and in 1990, the LinOaks Motel and Apartments site at the corner of Lincoln Avenue and Oak Street was selected. The proposed Main Library is programmed as a two-story, 45,000-square-foot facility with a partial basement and adjacent below-grade and street-level parking. The City has applied to the State Library for assistance with construction financing (Proposition 85) and is proceeding with an environmental impact report on the new Main Library building. The historic Main Library will be restored and rehabilitated for an appropriate new use.

SPACE FOR THE ARTS

The need for an arts center was strongly felt by participants in a community workshop on the General Plan, who spoke of the richness of Alameda's artistic life and the lack of performance, rehearsal, exhibit, and classroom facilities. Theater companies, dance troupes, painters, sculptors, and filmmakers are continually searching for adequate space that might most efficiently be provided in an arts center. An arts center would enhance Alameda's cultural life and increase community awareness of arts resources.

ALAMEDA HISTORICAL MUSEUM

The Alameda Historical Museum was established in 1949 and is the official repository of the City's historic artifacts. It is currently located in leased space which is inadequate to effectively house and display its collection and to enable it to conduct educational and recreational programs for the benefit of the community. A permanent home for the museum in a more appropriate setting would insure the continuation of an important cultural resource that could better preserve and promote the rich history of Alameda.

Guiding Policies: Cultural Facilities

- 6.4.a Design the new Main Library as an important element of a future Civic Center.
- 6.4.b Encourage and support private groups in their efforts to create an arts center for Alameda. Encourage the use of an existing architecturally distinguished building as an arts center.

Support could include assistance in obtaining grants, evaluation of the suitability of re-use of existing structures, and participation in making a site available at below-market cost.
- 6.4.c Encourage and support the Alameda Historical Museum in its efforts to secure a permanent, suitable facility.



City of Alameda

General Plan

7 Airport Environs Element

7 AIRPORT ENVIRONS ELEMENT

Alameda is subject to noise nuisance, aircraft overflights, and safety concerns from operations at three airports: Metropolitan Oakland International (MOIA), Alameda Naval Air Station (NAS), and San Francisco International (SFO). The airports are increasingly aware of their impacts on nearby residents. However, the City has no direct ability to affect their operations. The Oakland Airport is owned by the Port of Oakland, the City and County of San Francisco owns SFO, and the Department of Defense controls NAS.

Inclusion of the Airport Environs Element in the General Plan is optional per Section 65303 of the Government Code. This Element contains policies that the City will implement, as well as requests for actions by the airport proprietors.

The purposes of the Airport Environs Element are to consolidate policies relating to airports at a single location in the General Plan document and to direct maximum attention to the impacts that aircraft operations have on Alameda. Consequently, the Health and Safety and the Transportation elements refer the reader to this Element, and do not repeat policies relating to airport noise and safety.

7.1 REGULATORY FRAMEWORK: NOISE AND SAFETY

Federal Aviation Administration (FAA): Federal, State, City and County governments have interrelated responsibilities for airport noise and safety regulation. The Federal Aviation Act (1968 amendment) requires the FAA to consider noise as a criterion in its certification of aircraft and airports. Federal Aviation Regulations (FAR), Part 36, regulates aircraft noise emission levels, requiring all new aircraft to meet Stage 3 (least noisy) standards. In 1986 about 40 percent of the domestic, commercial aircraft fleet met Stage 3 standards; Stage 1 aircraft have been phased out of the domestic airline fleet. The time schedule for phase-out of Stage 2 aircraft will become known no later than July 1, 1991.

FAR Part 150, effective in 1985, provides funding to airport operators for preparation of noise exposure maps (NEM) and noise compatibility programs (NCP). Following FAA approval, the airport becomes eligible for funds to abate on-airport and off-airport noise. Cities adjacent to airports are also eligible to receive FAA funding for noise mitigation actions. The MOIA Part 150 program was submitted for FAA approval in 1988. Noise exposure maps for 1986 and 1991 forecast conditions have been accepted by the FAA, but the FAR Part 150 noise compatibility program for MOIA was returned to the Port of Oakland for

revision. As of July 1, 1990, the MOIA NCP has not been resubmitted to the FAA. Until it has been approved, no Federal funds will be available for noise abatement projects.

California Airport Noise Standards: Standards enacted in 1971 required that all land uses within the 65 dB Community Noise Equivalent Level (CNEL) contour in an airport vicinity be compatible with aircraft operations by 1986. An airport proprietor must obtain a variance from the standards if incompatible uses create a "noise impact area." The area within the 65 dB CNEL noise contour that includes residential uses lacking sound insulation to reduce CNEL to 45 dB or less in habitable rooms is termed the "noise impact area."

In 1972, the Alameda County Board of Supervisors declared MOIA a "noise problem airport." This was an administrative determination which allows the State of California to require MOIA to apply for a variance from the State Airport Noise Standards. As of this date, MOIA has not made such application because the extent and nature of MOIA's noise impact area has yet to be adequately defined. MOIA has carried out a program of quarterly noise monitoring, using portable noise measurement equipment, for a period of several years. The results of this monitoring have been inconclusive, and MOIA is currently installing a permanent noise-monitoring system capable of defining the Airport's noise impact area in sufficient detail to finally determine whether a variance is required. Recent changes to the State Airport Noise Standards may work against such a determination in that residential uses subject to aviation easements or having an interior noise level of CNEL 45 dB (or less) as a result of architectural acoustic measures are now deemed compatible land uses and are not considered in determining whether a variance may be required. As a result of a 1976 agreement, new residential development in Harbor Bay Isle within the 65 dB CNEL contour has been subject to required aviation easements. The City's 1976 noise element requires that interior noise levels in habitable rooms attributable to exterior aircraft noise events shall not exceed a measured average CNEL value of 40 dB.

The variance procedure is a legal process involving a hearing before an administrative law judge, who has the power to impose conditions on the airport to achieve compliance with the airport noise standards. The City of Alameda has the right to participate in the proceedings and to set forth its position for consideration as part of the conditions to the variance.

Metropolitan Transportation Commission (MTC): MTC's Regional Airport Planning Committee is coordinating revision of the Regional Airport Systems Plan which is scheduled for completion by March 1992. As with other transportation facilities, MTC approval is necessary if federal construction

funds are to be used. During revision of the RASP, Alameda will have opportunities to address MOIA expansion issues.

Airport Land Use Commission of Alameda County (ALUC):

California requires that airport planning and off-airport land use measures affecting airports be implemented in each county by an appointed Airport Land Use Commission (ALUC). The Alameda General Plan must be consistent with the *Alameda County Airport Land Use Policy Plan* (1986) unless the City Council overrides the ALUC by two-thirds vote and makes findings that alternative policies are consistent with the purposes of the ALUC law which emphasizes promoting orderly expansion of airports and adoption of land use measures by local public agencies to minimize exposure to excessive noise and safety hazards near airports. The ALUC plan is required to reflect the anticipated growth of the airport during at least the next 20 years.

The Port of Oakland must refer proposed changes in its Airport Master Plan to the ALUC for review. If the ALUC finds the Port's plan inconsistent with its plan, the Port may revise its plan or may override the ALUC by a two-thirds vote if it makes specific findings that its action is consistent with the purposes of Public Utilities Code 21670 which establishes ALUCs.

Safety (crash hazard) zones designated by the ALUC and APZs (Accident Potential Zones) designated by the Navy are shown in Figure 7-1. Figure 7-2 identifies runways. A majority of the outer portion of the safety zones under departure tracks from MOIA Runways 27R/L is a developed residential neighborhood. ALUC policies prohibit new housing in safety zones, although ALUC Policy 24 allows infill residential development if findings are made.

Within the outer portion of the safety zone for Naval Air Station Runway 25, which includes Alameda Gateway and Mariner Square, ALUC policies recommend warehousing, non-intensive recreation, and equipment storage. Uses are defined as incompatible if they would yield a density of more than 25 persons per net acre over an eight-hour period or a density of more than 50 persons per net acre for more than two hours per day. New shopping centers, restaurants, schools, hospitals and arenas are listed as examples of incompatible uses.

The policies of the Airport Environs Element are consistent with those of the *ALUC Policy Plan*.



Sources:

Safety Areas - "Alameda County Airport Land Use Comission, Airport Land Use Policy Plan," Adopted July 16, 1986.

Airport Noise - Port of Oakland, "Final Report, FAR Part 150 Noise Exposure Maps and Noise Compatibility Program, Oakland International Airport," April, 1988. 1987 CNEL as provided to the City of Alameda by Port of Oakland Staff.

Naval Air Station Noise - Alameda Naval Air Station, "An Installation Compatibility Use Zones Study Update", December 1986.

ALUC Safety Zones



Clear Zone



Inner Portion



Outer Portion

Note: APZ Zones outside of City boundary are not shown.



Alameda NAS APZ II
(Accident Potential Zone)



General Referral Area Boundary



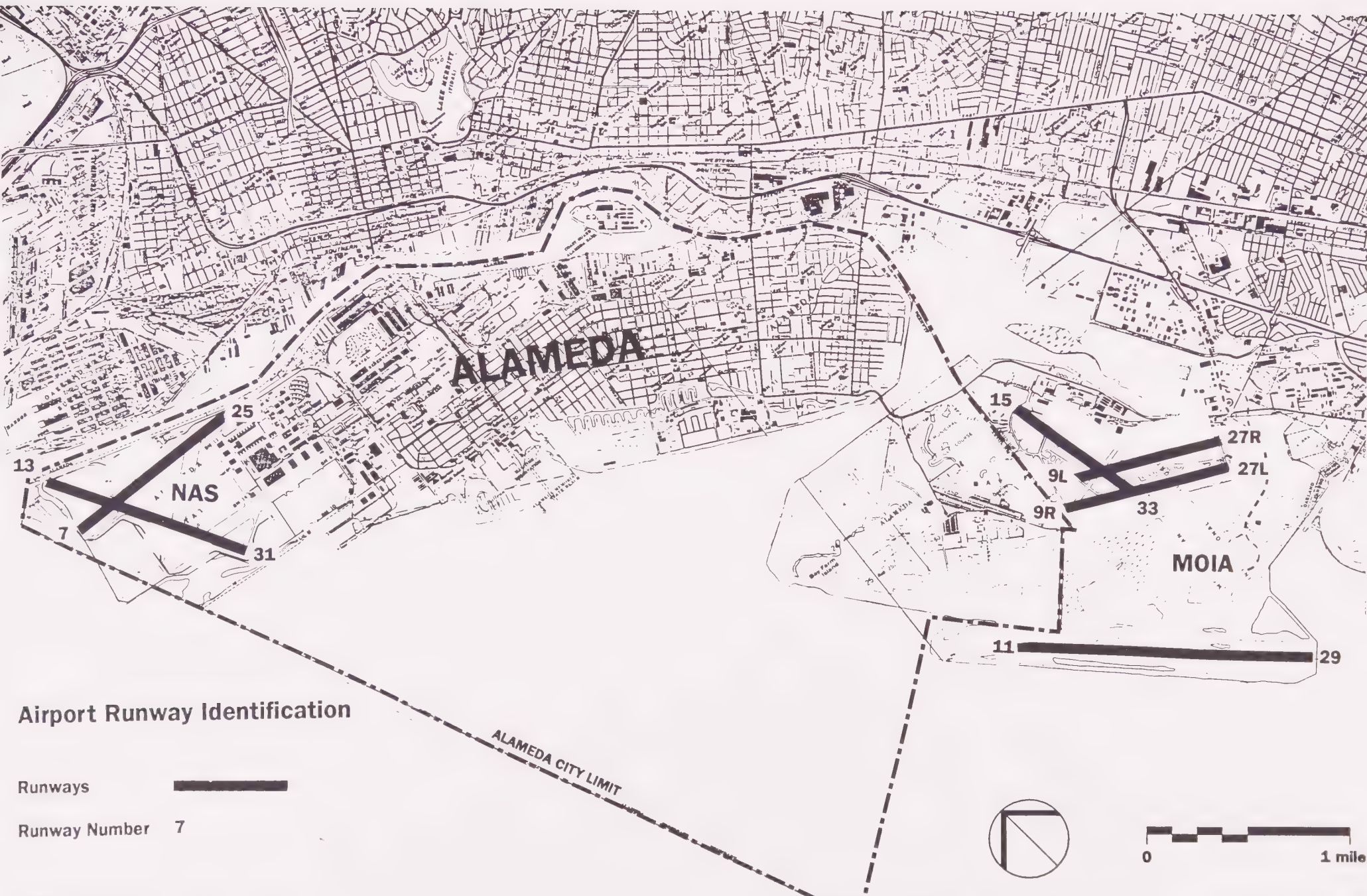
Height Referral Area Boundary



Airport & Naval Air Station CNEL



**City of Alameda - Figure 7-1
Airport Impact Areas**



Airport Runway Identification

Runways

Runway Number

Source:
 "Alameda County Airport Land Use Commission,
 Airport Land Use Policy Plan," Adopted July 16, 1986.

City of Alameda - **Figure 7-2**
Airport Runways

Alameda Naval Air Station (NAS). The CNEL 65 dB contour (1983) adjoins Main Street (Figure 7-1). The Accident Potential Zone (APZ) for Runway 25 extends east of the ALUC safety zone to include a portion of Marina Village. The NAS poses no objection to a proposed two-story office building within this extended area.

7.2 AIRPORT IMPACT AREAS

As shown on Figure 7-1, all of Alameda is subject to ALUC regulation due to the proximity of MOIA and NAS. About 1,600 existing and approved homes on Bay Farm Island are within the 65 dB CNEL contour. An undetermined number of these are older units that are not subject to an aviation easement and do not meet the 45 dB CNEL standard for habitable rooms. Only these are in a "noise impact area" as defined by California Airport Noise Standards. Overflights from SFO add to the decibel level in much of the City. Safety zones for MOIA's North Field and for NAS Runway 25 limit development. The height of structures throughout the City is subject to ALUC policies, although General Plan policies establish lower maximums.

Guiding Policies: Airport Impact Areas

- 7.2.a Regulate development in Alameda to minimize hazards in safety zones designated by the Alameda County Airport Land Use Commission and Accident Potential Zones designated by the U.S. Navy.
- 7.2.b Do not approve incompatible development in noise/safety sensitive areas.

The ALUC Plan specifies allowable uses, densities, and heights of structures, and the Health and Safety Element incorporates Table 8-1, Land Use Compatibility Standards for Community Noise Environments.

MOIA safety zones on Bay Farm Island are identical to the safety zones in Alameda's 1976 Safety Element, and the NAS APZ along the Estuary is similar. Existing low-density residential development under the straight-out take-off tracks from MOIA North Field Runways 27R/L is a less-than-optimal situation, according to both ALUC and City policies. ALUC will consider exceptions to permit minor residential additions, replacement, and infill (where 80 percent of the parcels within 250 feet are developed) on a case-by-case basis.

- 7.2.c Seek ways to ensure provision of effective sound mitigation for all housing units in noise impact areas.

If grants to property owners for sound insulation become available, the number of units that will be protected still is uncertain. Mitigation could be required for projects subject to discretionary review, or when units are enlarged or transferred.

- 7.2.d Encourage MOIA to limit night use of North Field to Stage 3 aircraft.

- 7.2.e Ensure that purchasers of property currently or potentially subject to noise levels exceeding 65 dB CNEL are aware of such conditions, of City policies regarding mitigation, and of limitations to the City's ability to abate nuisances when such properties are subject to an aviation easement.

This is consistent with Policy 20 of the 1986 ALUC Plan.

Implementing Policies: Airport Impact Areas

- 7.2.f Limit development in Alameda Gateway (Todd Shipyard) to uses consistent with ALUC policy for the outer portion of the ALUC Safety Zone for NAS Runway 25.

Existing development that includes warehousing, nonintensive industry, and equipment storage is consistent with ALUC policy, but current (1990) zoning regulations allow any nonresidential use permitted in Alameda. Under ALUC Safety Zone Policy 3.2 new shopping centers, restaurants, schools and hospitals are not compatible.

- 7.2.g Consider approval of compatible infill or replacement housing within the outer ALUC Safety Zone for MOIA Runways 27 R/L on a case-by-case basis. Refer proposed infill or replacement projects to the ALUC for Determination of Plan Consistency.

Under its Policy 24, ALUC may make findings that permit infill development. The 1976 Alameda Safety Element permitted residential development if (a) all aircraft weighing more than 12,500 pounds are prohibited from using a straight-out take-off from Runways 27 R/L, (b) there are no other feasible locations for residential development, and (c) population densities do not exceed 25 persons per acre. Straight-out departures continue, despite efforts to reduce the number of such flights, and cannot be directly curtailed by the Port of Oakland. The FAA air traffic control assigns departure paths in low-visibility conditions and has refused an Airport management request to establish a curfew on all instrument low-altitude departures from North Field between 10 p.m and 7 a.m. The risk to existing residents is reduced by the infrequency of heavy aircraft flights using the straight-out tracks.

- 7.2.h Require acoustical analysis and noise-reduction measures as prescribed in Policies 8.7.e, .f, and .g for new or replacement dwellings, hotels, motels, schools, and health-related uses.

Sound insulation is required to ensure a maximum interior 45 dB CNEL in new residential, education, and health-related uses in aircraft noise areas. (ALUC Policy 18, 1986.) Policy 8.7.f limits noise to 40 dB CNEL in habitable rooms of new dwellings subject to a noise easement.

- 7.2.i For new or replacement residential development within 500 feet north of the 65 dB CNEL Settlement Agreement line on Bay Farm Island, insulation shall meet the standards established in the ALUC Plan for assumed exterior 65 dB CNEL.

See Policies 8.7.f and .g.

- 7.2.j New or replacement residential development shall be allowed between the 65 dB CNEL Settlement Agreement line and the 70 dB CNEL contour on Bay Farm Island if the property is subject to a noise easement.

See Policies 8.7.f and .g.

7.3 AIRPORT OPERATIONS AND DEVELOPMENT

Future airport impacts will vary with passenger and cargo volume, which will be affected by decisions to build or not build new runways and terminals by types of aircraft used, and by opportunities to employ noise abatement traffic patterns.

Metropolitan Oakland International Airport (MOIA): Operations from both North Field (general aviation) and South Field (scheduled airlines and cargo) create noise nuisance and safety concerns in Alameda. A portion of the neighborhood near Maitland Drive on Bay Farm Island is exposed to 65-70 dB CNEL, and construction of approved units in Harbor Bay Isle Village 5 will expose several hundred residents to similar noise levels. New construction in these areas is subject to aviation easements and interior sound attenuation requirements, but high single-event noise levels cause discomfort.

MOIA, the nation's 18th busiest airport, served 5 million passengers in a 12-month period ending July 31, 1990. The volume for 1992 is projected by the Port of Oakland to reach 6+ million passengers, increasing to 10 million by 2007. Air cargo gains are projected to average 6.5 percent annually, increasing from 297,000 tons in 1988 to 1,055,000 tons in 2007. Federal Express currently operates a regional hub that is its second largest facility, processing 120,000 parcels a night.

North Field is primarily limited to takeoffs and landings of general aviation aircraft with a certified gross take-off weight below 12,500 pounds. These aircraft can be characterized as having one or two engines, and are both propeller-driven and turbo-jet. Under certain conditions prescribed by the 1976 Settlement Agreement between the City and the Port of Oakland, such as emergency landings and takeoffs, or whenever major repairs are being made to South Airport Runway (29/11), the North Field is used by aircraft in excess of 12,500 pounds in weight.

The Port of Oakland is currently (December 1990) revising its Airport Master Plan and is studying seven alternatives for runway expansion, although there is significant unused capacity that makes construction unnecessary in the near term. Do-nothing and demand management alternatives were studied and rejected. The runway alternatives fall in three categories: inboard and outboard South Field expansions and North Field expansion. An extended controversy would result from selection of either runway expansion at North Field, which would add noise in Alameda, or filling the Bay for a new runway outboard of existing Runway 11-29, which would be opposed by the Bay Conservation and Development Commission (BCDC) and environmentalists. A new runway inboard of 11-29 would be equally controversial because it would also

result in increased overflights and noise exposure levels for Alameda residents, and would affect 135 acres of wetland/wildlife habitat.

The Noise Compatibility Program (FAR Part 150) completed in April 1988 includes noise mitigation recommendations, but does not extend noise projections beyond 1991 and does not analyze the effects of runway additions or extensions. Moreover, none of the operational noise abatement measures recommended by the Program has been accepted by the FAA as of July 1990.

Alameda Naval Air Station (NAS): The most recent analysis of noise and accident potential was prepared in 1986 and reflects 1983 operations. Use of Runway 25, which has the greatest effect on Alameda, has been curtailed over the past several years. There are no announced plans for changes in NAS activity that would change noise or hazards exposures.

San Francisco International Airport (SFO): Flight tracks that affect Alameda and other East Bay communities are used by 35 percent of the 650 daily departures. It has been estimated that SFO operations add 1 to 1.5 dB to the MOIA noise contour. Most aircraft departing SFO attain an altitude of 5,000 feet before reaching the East Bay shoreline. Ground level noise from these departures ranges between 60 and 70 dB and is classified as single-event noise because it is intermittent. These overflights are expected to continue because of congested air space and aviation safety considerations, and noise problems on the San Francisco peninsula.

Guiding Policies: Airport Operations and Development

- 7.3.a Seek adherence by airport operators to operational, development and management policies that will minimize noise nuisance and safety concern for Alameda.
- 7.3.b Urge MTC to address the limits of expansion of MOIA and SFO, other than operations permitted by the 1976 Settlement Agreement, and the need for additional commercial airport(s) at less congested locations in the 1990 revision of the Regional Airport Systems Plan (RASP). Insist that the RASP evaluate the merits of expanding MOIA vs. adding capacity at alternative locations serving the Bay Area.

The Oakland Airport Master Plan Update prepared for the Port of Oakland projects 10 million annual passengers (MAP) by 2007 vs. 4.2 million in 1989 and a maximum of 6 million in the Master Plan Outline incorporated in the 1976 Settlement Agreement between the City and the Port of Oakland. At 5-7.5 MAP the 1986 ALUC Plan notes that the CNEL band might shift north 400-500 feet over portions of the neighborhood west of Maitland Drive. Projections of CNEL for 10 MAP have not been published (June 1990).

MOIA Master Plan Update studies eliminate a "demand management" alternative that would shift activity to other locations as inconsistent with FAA recommendations and ABAG/MTC policy. MTC should be apprised of the City's concerns in this regard and urged to consider alternatives to the unlimited expansion of MOIA.

7.3.c Establish effective regular communication among the City of Alameda, Port of Oakland, and the Federal Aviation Administration regarding noise control at MOIA.

7.3.d If an additional runway is warranted at MOIA, a runway outboard of Runway 11-29 is acceptable in principle to Alameda. No commitment to capacity expansion should be made until the 1990 revision of the Regional Airport System Plan (RASP) is complete and is adopted by MTC/ABAG.

Studies by the Airport's consultants (1989) show that North Field expansions would result in a sevenfold increase in noise impact to sensitive receptors. North Field expansion is unacceptable to the City. The 1972 RASP supports expansion of the Oakland Airport only if a parallel runway is constructed in the Bay. However, the 1980 Regional Airport Plan (RAP) Summary, which updated the 1972 RASP, does not propose any additional runways, and advises that the forecasted growth for Oakland Airport can be accommodated on a single runway with proper management.

Implementing Policies: Airport Operations and Development

7.3.e To the extent permitted by the 1976 Settlement Agreement, insist that the revised Regional Airport Systems Plan establish a maximum level of activity for the Metropolitan Oakland International Airport that will not create noise or overflight impacts in excess of those that would result from serving 6 MAP or from a specified future

maximum level of activity to be determined. Obtain support in affected communities and among regulating agencies for measures that will prevent construction of airport facilities to accommodate traffic that would cause projected impact levels to be exceeded.

- 7.3.f Seek Port of Oakland's voluntary agreement to implement mitigation measures beyond those contained in the 1976 Settlement Agreement, including mitigation measures regarding operations off existing runways.
- 7.3.g Create and participate in a continuing working group (community forum) composed of individuals representing the City of Alameda, the Port of Oakland, the Federal Aviation Administration (FAA), and the air transport industry to monitor the airport's noise control program and to make recommendations for response to any unforeseen conditions.

Lack of a clear institutional structure under which aircraft noise issues may be addressed has forced Alameda's citizens, staff, and City Council to react to events without knowing or being able to discuss operating decisions that cause noise nuisance.

- 7.3.h Obtain assurance that the future noise exposure for Alameda is known and that aircraft operations will be controlled to ensure that noise levels projected to result from implementation of the MOIA Master Plan will not be exceeded. Validation of the 65 dB CNEL contour is to be carried out by means of a permanent full-time noise monitoring system to ensure compliance with the California Airport Noise standards and the ALUC Plan.

Decisions on location and noise insulation standards for sensitive uses must be made with confidence that acceptable noise levels will be maintained.

- 7.3.i Mitigation for any expansion of MOIA should include the following operational measures:
- o Use of Stage 3 (least noisy) aircraft only, on all runways directly overflying Alameda residential areas.
 - o Enforced flight path alterations for noise abatement, for all runways, with remote monitoring sites installed in locations mutually acceptable to the Port and the City.

- o Prohibition of touch-and-go operations by jet aircraft.
- o Prohibition of noisy engine ground run-ups at night.
- o Prohibition of intersection departures on Runway 27.
- o Enhanced transit access to the airport via a BART/light rail extension.

7.3.j Support the Port of Oakland in establishing a permanent full-time noise monitoring system that will (a) measure noise continuously, (b) separate MOIA noise events from other noise source events, particularly overflights from other airports, (c) measure and augment CNEL values, (d) provide information on excessively noisy aircraft operations, (e) monitor effectiveness of noise abatement programs, and (f) meet the performance specifications of the California Noise Standards.

7.3.k Define noise exposure to incorporate Alameda's concerns about the loudness of individual events and nighttime noise.

Community Noise Equivalent Level (CNEL) is a 24-hour-energy equivalent level derived from a variety of single-noise events. Factors are applied to account for the greater disturbance caused by evening and night noise. However, CNEL may understate the stress for many people caused by noises such as infrequent single events at night.

7.3.l Initiate an acoustical treatment program for noise-sensitive uses based on the Part 150 Study, and financed by FAA funds and local matching dollars to be provided by the Port of Oakland, to mitigate existing and future noise exposure within residences and schools to 45 dB CNEL.

Owners of existing residential structures within the current or projected 65 dB CNEL boundary would benefit from acoustic treatment offered in exchange for an aviation easement. See Noise Policy 8.7.e.

7.3.m

Initiate meetings with San Francisco International Airport to seek reduction in overflights from San Francisco International Airport (SFO), especially nighttime departures.

Currently, 35 percent of SFO departures fly over Alameda. Other patterns may be available.



City of Alameda

General Plan

8 Health and Safety Element

8 HEALTH AND SAFETY ELEMENT

State law requires a safety element to outline policies which will protect the community from both natural and human-induced disasters. This Health and Safety Element considers seismic, geologic, and soils hazards, fire hazards, flooding, hazardous materials release, waste management, magnetic fields, emergency management, and noise. Due to the City's relatively flat topography, its built-up character, and its location, slope failure, wildlands fires, and dam failure are not considered threats to Alameda.

The seismic safety policies in Section 8.1 incorporate lessons learned during the Loma Prieta earthquake of October 1989. Property damage in the City involved ground infrastructure, such as sewer lines, gas mains, storm drains, and water mains, and streets and sidewalks which buckled and cracked. Brick chimneys on older structures collapsed. Most of the damage occurred in the Marina Village, Southshore, and Harbor Bay Business Park areas.

Following the earthquake, an Alameda Hazard Mitigation Team (AHMT) composed of six City departments analyzed emergency response and prepared a list of recommendations designed to save lives, lessen injuries, and reduce damage during future earthquakes. The recommendations are listed as "work elements," and specify tasks in detail. While not adopted as a part of the General Plan, the *City of Alameda Annex to the State Hazard Mitigation Plan for the October 17, 1989, Loma Prieta Earthquake, California*, should be used as a planning reference document. Some of the measures proposed by the AHMT are also helpful when coping with disasters, such as fires, flooding, or hazardous materials release.

The City is preparing an updated Emergency Operations Plan, which is expected to be adopted as the guide for disaster planning in Alameda.

The Bay Area Regional Earthquake Preparedness Project, County Disaster Planning, and the State Office of Emergency Services can provide additional reference materials for interested citizens.

8.1 SEISMIC, GEOLOGIC, AND SOILS HAZARDS

The largest concern regarding geologic and soils hazards in Alameda centers on the primary and secondary effects of ground movement due to earthquakes. After the initial shaking, secondary seismic hazards associated with earthquakes include liquefaction, lateral spreading, cracking of the ground surface, sand boils, slope failure, tsunamis and seiches. The likelihood of occurrence of these secondary effects due to groundshaking (with the exception

of tsunamis and seiches) in the region is high. Other hazards include erosion due to wind and wave motion, slope instability, and differential settlement.

Guiding Policies: Seismic, Geologic, and Soils Hazards

- 8.1.a A soils and geologic report will be submitted if required by the Director of Public Works prior to the issue of all grading and building permits and submission of final maps, in accordance with the Subdivision Ordinance, to evaluate the potential for lateral spreading, liquefaction, differential settlement, and other types of ground failures.

Parts of Bay Farm Island, the South Shore area, the Oakland Airport, and the NAS were subjected to liquefaction and sand boils during the Loma Prieta earthquake.

- 8.1.b Require design of new buildings to resist the lateral effects and other potential forces of a large earthquake on any of the nearby faults, as required by the Uniform Building Code.

The San Andreas, Hayward, Calaveras and San Gregorio faults are of primary concern in the evaluation of seismic activity that affects the San Francisco Bay Area and Alameda. Any of these four faults are capable of producing large, destructive earthquakes that could affect the entire region.

- 8.1.c Require building design to incorporate recommendations contained in the soils and geologic report.

- 8.1.d Require all structures of three or more stories to be supported on pile foundations that penetrate Bay Mud deposits to firm, non-compressible materials, unless geotechnical findings indicate a more appropriate design.

- 8.1.e Design underground utilities to minimize the effect of differential ground displacements.

- 8.1.f Continue to provide for the identification and evaluation of existing structural hazards, and abate those hazards to acceptable levels of risk.

The City has identified unreinforced masonry (URM) building hazards and will continue to refine abatement policies (such as retrofitting), based on the nature of the building, as well as its location, historic value, and value as a revenue producer to the City. Other types of vulnerable construction, such as tilt-up slab, inadequately braced wood frame construction, and non-anchored wood frame construction, are numerous in Alameda and have not been identified. The prevalence of these types combined with the soil profiles in Alameda leaves a large unidentified threat.

Funding for preventive measures such as reinforcing URM buildings, or bracing and bolting structures to their foundations is not readily available through specific State or Federal sources. According to the State Office of Emergency Services (OES), limited funds may become available through FEMA's Hazard Mitigation Grant Program. With \$15 to \$20 million to distribute throughout a 10-county area, OES is prioritizing requests which exceed available funds by over \$80 million. To encourage retrofitting, the City may choose to consider offering owners subsidies, tax incentives, or low- or zero-interest loans.

Implementing Policies: Geologic, Seismic, and Soils Hazards

- 8.1.g Design building entrances, exits, and other vital features to accommodate expected settlement.

Buildings should be sited so entrances, exits, and other vital structures continue to be accessible as settling occurs.

- 8.1.h Require owners of shoreline properties to inspect, maintain, and repair the perimeter slopes according to City standards as settlement occurs due to the consolidation of underlying Bay Mud and wave erosion.

Bay Mud (a silty clay rich in organic materials) and Merritt Sand (a loose, well-sorted fine- to medium-grained sand with silt) are the two base soils underlying Alameda. Development along the edges of the Main Island and on all of Bay Farm Island rests on fill overlying Bay Mud. Bay Mud is prone to consolidation, leading to surface settlement, and potentially increasing perimeter erosion.

Projects such as the proposed Ballena Isle Hotel could increase island erosion, and should be mitigated according to City specifications/standards.

- 8.1.i Develop a comprehensive public information program, supervised by one department, that provides information on seismic hazards, including structural and nonstructural hazards, and areas most susceptible to damage.

Current (1990) public information programs are fragmented, and different types and depths of information are handled by different offices, such as the City Manager's Office and the Fire Department.

The Fire Department's emphasis is on teaching earthquake preparedness and citizen self-help. Homeowners are encouraged to perform cost-effective seismic upgrades to their homes, such as bolting house frames to the foundation, sheathing cripple walls, strapping water heaters to studs, inspecting and repairing masonry chimneys, and developing neighborhood-level preparedness.

- 8.1.j Amend the local Uniform Building Code, as frequently as may be prudent, to incorporate standards for new and modified construction pertaining to development on areas of fill or underlain by Bay Mud or Merritt Sand.

- 8.1.k Conduct periodic earthquake and emergency fire drills; coordinate these drills on a regional basis in cooperation with involved jurisdictions and affected community organizations.

This policy, from the 1976 Safety Element for Alameda, continues to have relevance and important public health and safety benefits. Multijurisdictional disaster planning is essential given the contiguous boundaries of cities within the Bay Area.

- 8.1.l Continue to cooperate with the East Bay Regional Park District on beach erosion abatement.

While tides and currents move sand from Crown Memorial State Beach, the joint efforts of the City and the East Bay Regional Park District serve to mitigate this erosion. To maintain the beach, sand is caught in offshore traps and returned to the beach. Vegetation helps anchor the sand.

8.2 FIRE HAZARDS

Major fires are most likely to occur in large apartment complexes or industrial areas. Fires resulting from the rupture of local gas or electric lines during an earthquake could be severely compounded by water main failures.

Guiding Policies: Fire Hazards

- 8.2.a Maintain and expand the City's fire prevention and fire-fighting capability.

The Fire Department is requesting a new fireboat which, when coupled with a recently ordered 5-inch hose, could provide a virtually unlimited supply of Bay water to much of the City, regardless of earthquake-induced damage to the EBMUD water main system.

- 8.2.b Maintain the current level of emergency medical service.

Implementing Policies: Fire Hazards

8.2.c Update the City's list of "critical facilities."

The 1976 Safety Element contained a listing of 49 "critical facilities" in Alameda, "whose presence and continued functioning constitutes a vital role in a potential emergency, or whose failure might prove catastrophic." These facilities included the hospital, fire and police stations, City Hall, schools, auditoriums, and ambulance services.

8.2.d Assure the compliance of new structures with the City's current Fire, Seismic, and Sprinkler Codes. Existing structures shall be required to comply with the intent of the Codes in a cost-effective manner.

Judgment and ingenuity are needed to balance safety concerns with economic realities so that Alameda can retain moderate-cost living and working space as well as important historic buildings.

8.2.e Require new development to plan underground utilities so disruption by earthshaking or other natural disasters is diminished.

8.3 FLOODING

The 100-year flood (a flood having a one percent chance of occurrence in any year) generally has been accepted as the basis for flood hazard evaluation, flood insurance, and flood planning. Although the San Francisco Bay region is rarely subjected to area-wide floods, the potential for a 100-year flood in Alameda needs to be evaluated. Physical changes of land in Alameda include modification and additions of lagoons on Bay Farm Island, additional fill and new development on Bay Farm Island, and new development and land-use changes on the Northern Waterfront near the Posey Tube.

The Preliminary Flood Insurance Study, published in June 1990, but still awaiting adoption, delineates the boundaries of areas subject to 100- and 500-year floods. Preliminary flood insurance maps prepared by the Federal Emergency Management Agency are the source for flood areas shown on Figure 8-1, Environmental Hazards.

Global warming and accelerated sea rise could have severe long-term effects on Alameda. There is little the City can do to prevent sea level rise, although citizens acting individually may collectively make a difference. Plan



Flood Map Sources
Preliminary Flood Insurance Rate Map for Alameda, June 1990.
Soil Conditions: USGS Professional Page 943, *Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning*, 1979.

Toxic Hazards Sources
San Francisco BCDC, *Water Quality in San Francisco Bay*, January 1987.
US Department of the Navy, "Alameda Installation Restoration Program Information Release," April 1989.
Citizens for Better Environment, *Toxic Hot Spots in San Francisco Bay*, Report #87686, August 1987.
Regional Water Quality Control Board, May & June 1990.
State Water Resources Control Board, *State Mussel Watch*, June 1989, June 1990.
Environmental Protection Agency.
City of Alameda, *Hazardous Waste and/or Substance Sites List*.

City of Alameda - **Figure 8-1**
Environmental Hazards

policies encourage an awareness that will allow the City to design appropriate responses should the need arise.

Guiding Policies: Flooding

8.3.a Adopt the final version of the June 1990 Preliminary Flood Insurance Rate Maps produced by the Federal Emergency Management Agency for Alameda.

8.3.b Ensure that structures proposed for sites located on flood plains subject to the 100-year flood are provided adequate protection from floods.

Portions of Alameda identified to be at risk include areas along Main Street near the Gateway and near the Webster Street/Posey tubes.

8.3.c Monitor EPA reports on sea level rise in order to anticipate impacts if sea level rise accelerates; coordinate with BCDC to design an appropriate response.

Accelerated rates of rise would require an aggressive response on a regional basis. Estimates for future rates of sea level rise vary widely, from 4.32 inches over the next 50 years to estimates of up to 10 feet over the next 100 years. A representative of the EPA notes that there is perhaps a 5 percent chance that sea level rise by 2100 would exceed 6 feet.

8.3.d Support national and international efforts to protect the Earth's ozone layer, including policy to minimize or prevent the release of chlorofluorocarbons and similar gases.

The City's efforts to prevent the release of gases which contribute to the "Greenhouse Effect" would make only a tiny difference. However, international concern over this issue may lead to stricter controls of these gases over the next two decades on national, State, and local levels.

Actions individuals can take to slow global warming include planting more trees (specified as a part of the Street Tree Management Program, described in Section 6.1), using alternative forms of transportation to help reduce CO₂ emissions caused by automobiles (described in Section 4.2, Transportation Systems Management,

Section 4.3, Transit, Section 4.4, Pedestrian Routes, and Section 4.5, Bikeways), recycling newspapers, glass, metal, and paper (specified in Section 8.4), and reducing use of plastic, styrofoam cups, and packaging materials.

- 8.3.e Support a multi-use concept of waterways, including, where appropriate, uses for flood control, open space, nature study, habitat, pedestrian circulation, and outdoor sports and recreation.

Implementing Policies: Flooding

- 8.3.f Use all possible means of reducing the potential for flood damage in Alameda. These may include the requirement of flood-proofing, flood forecast and warning or evacuation programs, and stringent groundwater management programs to prevent subsidence.

Relocation of existing structures has been identified as another method of reducing flood damage, but is considered generally economically infeasible and socially unacceptable.

- 8.3.g Require the maintenance of easements along those drainage ways necessary for adequate drainage of normal or increased surface runoff due to storms.

The lagoons on Bay Farm Island and along Otis Drive, for example, provide drainage for runoff and should be maintained as easements that preclude further development and enable continued maintenance.

- 8.3.h Require new drainage facilities to be designed to minimize the effects of settlement.

Areas of the island underlain by Bay Mud are especially susceptible to settlement and disruption of drainage and other underground facilities, because of the soft, compressible nature of the Bay Mud.

- 8.3.i Reduce the effects of surface runoff by the use of extensive landscaping, minimizing impervious surface and drainage easements.

The Harbor Bay Isle Master Plan uses some of these methods to reduce the amount of surface water runoff, thereby reducing negative impacts on the groundwater and natural drainage cycles. See also the Water Quality section within Section 5.1.

8.4 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

The careful management of hazardous materials and the reduction in generation and safe disposal of both hazardous and non-hazardous solid waste contribute to the maintenance of public health and safety. Although these issues are most effectively approached on a regional level, General Plan policies outline strategies for coping with the presence of hazardous materials in the waste stream through recycling.

HAZARDOUS MATERIALS

Hazardous materials are stored and transported throughout Alameda. Specific sites of concentrated materials include the Alameda Naval Air Station (nuclear materials and paint sludge) and the Alameda Hospital (biowaste). The residues of spent ammunition from the former gun range operations (at the Gun Club site) are currently being evaluated by the Alameda County Environmental Health Office to determine whether this material can be contained on site under paving. Hazardous materials found in industrial areas, small businesses, and households include: flammable and combustible liquids, solvents, paint, plating or photographic solutions, acids, and pesticides. Waste oil, gases, and other hazardous liquids associated with vehicle and heavy machinery maintenance are also present. General Plan policies support existing methods of problem assessment and response, and call for a comprehensive plan in the case of a large-scale disaster. Section 5.1 specifies policies governing the clean-up of potential water-quality-threatening hazardous water sites.

HAZARDOUS WASTE MANAGEMENT

Hazardous materials often end up as hazardous waste. The 1989 Alameda County Hazardous Waste Management Plan estimated that the City of Alameda generates slightly more than 6,000 tons of hazardous wastes per year, representing 6 percent of the total hazardous waste stream generated in Alameda County. The largest component of the local hazardous waste stream is waste oil, and the Alameda Naval Air Station is the largest generator of hazardous wastes, producing around one third of the City's total hazardous waste, and more waste than all the small waste generators combined.

The projected stream of hazardous wastes can be reduced significantly through both recycling efforts and source reduction. There are three large waste oil recyclers in Alameda County, All American Oil Co., Pleasanton, Evergreen Oil Inc., Newark, and Waste Oil Recovery Systems Inc., Oakland, and two recyclers specializing in commercial solvents (Baron-Blakeslee Inc., Newark, and Safety Kleen Inc., Oakland). The Plan supports the City's continuing participation in the Alameda County Hazardous Waste Management Plan program, and policies in Section 5.1 specify measures to protect water resources from contamination by toxic wastes.

SOLID WASTE MANAGEMENT

As with most East Bay cities, Alameda's non-hazardous solid waste is collected primarily by the Oakland Scavenger Company and taken to the Davis Street Transfer Station in San Leandro. From there, the solid waste is transported to and deposited in the Altamont Road Landfill. The NAS collects and hauls its own non-hazardous solid waste, which also goes to the Davis Street Transfer Station and the Altamont Road Landfill.

Altamont Road Landfill is anticipated to reach capacity and close in the year 2016; however, the life of the landfill could be extended with implementation of resource recovery programs. Alameda County's *Solid Waste Management Plan*, July 1987, encourages recycling, curbside pickup, and energy recovery (waste-to-energy) programs. The Alameda County recycling rate as of 1985 was estimated to be 10-12 percent, and the Solid Waste Management Authority has adopted a goal of recovering 75 percent of the waste stream by 2005.

The City Council recently selected Oakland Scavenger Company for a curbside recycling program. Residents would participate voluntarily, and would be able to dispose of newspapers, brown paper bags, food and beverage containers, white paper, computer paper, aluminum, glass, two-liter soda bottles, and plastic milk and water bottle containers. The program would also incorporate an educational component.

In addition to recycling, the *Solid Waste Management Plan* encourages implementation of small-scale waste-to-energy facilities. In the 1970s, the Alameda Bureau of Electricity (BOE) explored the options surrounding construction and operation of a waste-to-energy facility. Since then, the BOE developed other sources of electric power generation, and the waste-to-energy project is now inactive.

Guiding Policies:
Hazardous Materials and Waste Management

8.4.a Continue to identify and assess the risks associated with various hazardous materials transported in Alameda.

8.4.b Clarify responsibilities for resolving incidents of hazardous materials release.

Alameda County's Health Services is the legal lead agency for enforcing hazardous materials transport regulations, but the Alameda Fire Department has first-response responsibility, including cordoning off the area, identifying the substance, and preventing further harm.

8.4.c Apply the Emergency Operations Plan, if necessary, in response to a hazardous materials release disaster.

The Emergency Operations Plan outlines the primary and secondary functional responsibilities for each City department, in the case of an emergency or disaster.

8.4.d Continue to support the resource recovery measures specified in the Alameda County Solid Waste Management Plan, July 1987.

Resource recovery measures include recycling of aluminium, glass, newspapers, corrugated materials, and construction and demolition debris. The Solid Waste Management Plan additionally encourages the development of waste-to-energy facilities, composting practices, and the recovery and reuse of scrap iron, steel, and tin.

8.4.e Continue to support implementation of the Alameda County Hazardous Waste Management Plan.

The March 1989 Final Alameda County Hazardous Waste Management Plan was prepared by the Alameda County Hazardous Waste Management Authority to meet the requirements of AB 2948 (Tanner Bill). The goals of the Plan are to protect the public health, safety, welfare, and environment through eliminating land disposal of untreated hazardous waste, and to help business and households in Alameda County reduce hazardous waste production and manage their remaining waste effectively.

**Implementing Policies:
Hazardous Materials and Waste Management**

- 8.4.f Continue to rely on the mutual aid services of Alameda County and the Naval Air Station to reduce the potential for hazardous materials accidents.

See also policies 5.1.f, 5.1.s, 5.1.t, and 5.1.u for policies on hazardous waste which might affect water quality.

- 8.4.g Work to improve the training and capability of the Fire Department to handle moderate-size releases of hazardous materials without dependence on outside aid.

- 8.4.h Continue to remove the methane gas produced as a waste product of materials decomposing in the former dump, Mt. Trashmore.

This process is expected to be completed by the year 2000, and is required as part of the City's compliance with BAAQMD regulations. Methane, a colorless, odorless gas, is flammable.

- 8.4.i Require those who store hazardous materials to have the training and capacity to respond to their own emergencies.

In the event of a large-scale disaster, City personnel will prioritize emergency calls. Private and public agencies storing hazardous materials should be able to deal with containment and clean-up.

- 8.4.j Implement the recently approved residential area curbside recycling program.

- 8.4.k Design and implement a recycling program for commercial and industrial businesses, including paper product recycling strategies for business parks.

8.5 MAGNETIC FIELDS

Electric and magnetic fields abound in nature, and emanate from the flow of electricity through everything from transmission lines to household appliances. After several years of analysis of dozens of studies exploring a possible connection between cancer and extremely low frequency (ELF) electromagnetic fields, the EPA has concluded that a growing body of data suggests a causal link. Because the data suggests rather than proves a link, the EPA has not formally classified power-line electric magnetic fields as a potential carcinogen.

Congressional bills that would boost Federal funds for research into the biological effects of electromagnetic fields, including ELF fields from power lines in residential areas, are under consideration.

Guiding Policy: Magnetic Fields

- 8.5.a Support research on the health effects of magnetic fields generated by power transmission lines and other sources, and take appropriate action, if warranted, to reduce hazardous exposure.

Magnetic fields are measurable, but their intensity is not related to any yet-established health standards, and ELF effects on human tissue are subtle, complex, and poorly understood. Cancer risk has been associated with long-term residence close to high-voltage power lines and substations. Department of Energy and PG&E studies are in progress during 1990.

The Alameda Bureau of Electricity monitors the popular press and industry-related news in an attempt to keep the citizenry informed.

8.6 EMERGENCY MANAGEMENT

The Emergency Operations Management program in Alameda is intended to coordinate response to potential disasters such as hazardous materials spills or clouds, nuclear accidents, and hazards due to earthquakes, fire, or aircraft crash. Specific policies for each of these hazards are listed under Seismic Hazards, 8.1.; Fire, 8.2; Flooding, 8.3; and Hazardous Materials, 8.4. This section refers to the overall management and responsibility plan for controlling or reducing the consequences of any of these hazards if they are realized. The Emergency Operations Plan is still in its infancy; departmental annexes

outlining responsibilities are being developed, with completed annexes available for fire and rescue, personnel, and management departments. Disaster exercises are planned and carried out on a periodic basis. Since the details of emergency management will be specified in the Emergency Operations Plan (EOP), Section 8.6 only highlights a few key aspects of emergency preparedness.

Guiding Policy: Emergency Management

- 8.6.a Adopt the recommendations and standards to be established in the City of Alameda's Emergency Operations Plan as the guide for disaster planning in Alameda.

Implementing Policies: Emergency Management

- 8.6.b Designate staff and assign time for the continued update and implementation of procedures outlined in the Emergency Operations Plan (EOP).

The proximity of Alameda to two major earthquake faults, the large percentage of the City built on unstable soils, and potential isolation of the Main Island (outside aid would not be able to reach the Island by automobile if tubes and bridges failed) encourage the arrangement of staff time to complete emergency planning services.

- 8.6.c Establish community programs to train volunteers to assist police, fire, and civil defense personnel during and after a major earthquake, fire, or flood.

The City can encourage this training by publicizing courses available to the public in standard CPR and First Aid, as well as disaster-oriented training. The Emergency Operations Plan should specify locations to which volunteers can report during an emergency, and should include listings of appropriate jobs for volunteers. The City Personnel Department and the Alameda Red Cross should coordinate their efforts.

- 8.6.d Aim for City-level self-sufficiency in emergency response.

While multijurisdictional planning is an ideal, in the event of a regionwide disaster the emergency services of the State, County, and Federal agencies, and of adjacent locales may be severely strained. Slippage on the San Andreas or Hayward faults, for example, may interrupt communication with outside emergency services or cut off evacuation routes, requiring the City to handle the crisis in isolation. The Emergency Operations Plan may include provision for City personnel training as emergency services workers and damage assessors. Mass care centers will be identified, as will strategies for staffing, supplies, and coordination among City departments.

- 8.6.e Establish a priority system of evacuation routes.

Alamedans are limited to several "exits" from the City during an evacuation. Emergency personnel are reluctant to designate evacuation routes until a disaster occurs, since the details of a particular emergency (location and extent) will aid in determining evacuation pathways. Primary routes are Dollittle Drive, Posey Tube, and Park Street Bridge.

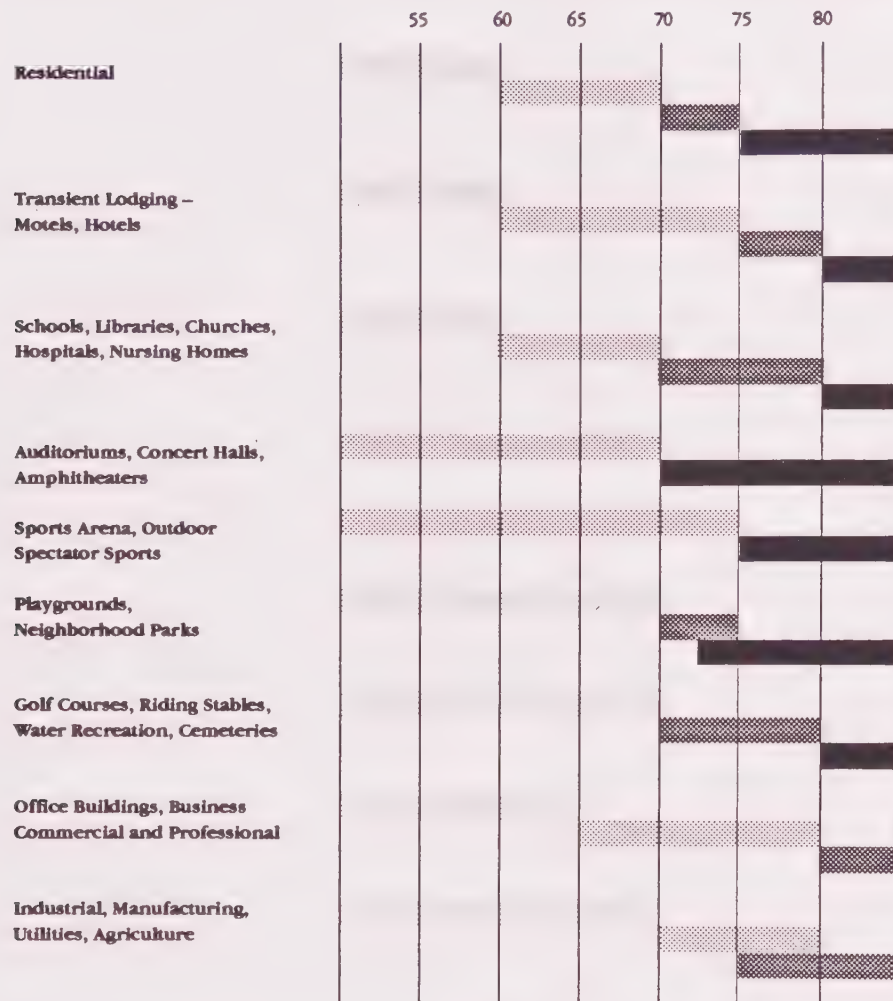
- 8.6.f Designate Crown Beach (parking lot), Rittler Park, Krusi Park, and the Municipal Golf Courses as emergency operations staging areas.

8.7 NOISE

Aircraft noise is Alameda's primary noise problem, followed by surface traffic noise. Section 7, Airport Environs Element, includes policies intended to limit airport noise and establish sound insulation requirements for noise-sensitive uses exposed to aircraft noise exceeding 65 dB CNEL. This section includes policies relating to all noise sources and establishes sound insulation performance standards. In recognition of the physiological and resulting economic effects of excessive noise, State law requires preparation of a Noise Element "which shall identify and appraise noise problems in the community." The California Department of Health Services publishes recommended Land Use Compatibility Standards for Community Noise Environments (Table 8-1) that are the basis for noise mitigation policies.

Table 8-1
**Land Use Compatibility Standards
 for Community Noise Environments**

Land Use Category Community Noise Exposure in Decibels (CNEL)
 Day/Night Average Noise Level in Decibels (Ldn)



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.



NORMALLY UNACCEPTABLE

New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



CLEARLY UNACCEPTABLE

New construction or development clearly should not be undertaken.

Source: Modified from State of California General Plan Guidelines, June 1987.

Figure 8-2 illustrates street noise in 2010, based on projected traffic volumes, speeds, and percentage of trucks, and assuming constant railroad use. The Community Noise Equivalent Level (CNEL) is a 24-hour energy equivalent expressed in decibels (dB), and is derived from a variety of single-noise events. To account for increased sensitivity to noise during the nighttime hours, the CNEL calculation penalizes evening and nighttime sound levels. The decibel (dB) scale is logarithmic; a 3 dB difference is barely discernible to most people, and a 10 dB increase is subjectively heard as a doubling of noise.

The CNELs on the map were prepared using a mathematical model of traffic noise that projects "worst case" conditions. It indicates where site-specific studies are needed to determine whether noise compatibility exists or how it might be achieved. To calibrate the model, 24-hour measurements were made in 1989 at typical building setback lines at six locations. Projected noise levels at buildout on Figure 8-2 are at 40 feet from street centerlines.

A table of distances from the centerline to contours of 60 dB and above, in 5 dB increments, appears in the Draft EIR Appendix 6, Projected (General Plan Buildout) Traffic Noise Contour Distance, City of Alameda. These contours assume no shielding by buildings. Because Alameda is densely built with narrow side yards, noise levels in the rear yards of houses and apartments typically are 10 dB lower than at the building facade. Thus, virtually all rear yards and homes on streets for which no noise level is indicated on Figure 8-2 are expected to be consistent with State guidelines. The major street noise problem is impact on the indoor environment in buildings facing streets exceeding 60 dB CNEL at 40 feet from the centerline.

With the exception of Harbor Bay Parkway, noise exposure along Alameda streets will not change significantly between 1989 and buildout. Increases will be 3 dB or less, a change that hardly will be noticed as it take place will over a period of years. Along Harbor Bay Parkway, increases of 7 to 8 decibels will not affect residential areas. Offices less than 150 feet from the Parkway centerline will be in the 65-70 dB range considered conditionally acceptable.

Railroad noise caused by delivery of one Southern Pacific train of one to 50 cars to the Alameda Beltline railyard between midnight and 6 a.m., Tuesday through Saturday, is expected to remain constant. Single event noise generated by the switching engine is 90 dBA, and the trains are required by law to sound their whistles at each of six grade crossings, emitting 100-105 dBA at 100 feet.



Sources:
 Surface Noise - Illingworth and Rodkin, Inc. June, 1990.
 Airport Noise - Port of Oakland, "Final Report, FAR Part 150 Noise Exposure Maps and Noise Compatibility Program, Metropolitan Oakland International Airport, April, 1988."
 Naval Air Station Noise - Alameda Naval Air Station, "An Installation Compatibility Use Zones Study Update", December 1986.

GLOSSARY

ABAG. Association of Bay Area Governments, an organization including most of the cities in the nine Bay Area counties.

AC Transit. The transit system which operates within Contra Costa and Alameda counties, including the City of Alameda.

Acoustical Engineer. An engineer specializing in the measurement and physical properties of sound. In environmental review, the acoustical engineer measures noise impacts of proposed projects and designs measures to reduce those impacts.

Acre-Foot. The volume of water that would cover one acre to a depth of one foot. An acre-foot is about the amount of water used each year in and around the home by two average California families.

Acre, Net. See Net Acre.

ADT. Average daily traffic, a two-directional 24-hour traffic volume.

Affordable Housing. Dwelling units for which the housing payment is not more than 30 percent of household gross income for a specified income group.

Airport Land Use Commission (ALUC). The county-level body, established pursuant to the State ALUC law, responsible for developing plans for achieving land use compatibility between airports and their environs.

Alameda Gateway. Formerly Todd Shipyard.

Alluvium. A general term for clay, silt, sand, gravel, or similar unconsolidated detrital material deposited during comparatively recent geologic time by a stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its flood plain or delta, or as a cone or fan at the base of a mountain slope.

APZ. Accident Potential Zone.

Army Corps of Engineers. A federal agency responsible for the design and implementation of publicly-supported engineering projects; any construction activity that involves filling a watercourse, pond, lake (natural or man-made), or wetlands (including seasonal wetlands and vernal pools), may require an Army Corps permit.

ARPD. Alameda Recreation and Park Department.

Artificial Groundwater Recharge. The process whereby water in an aquifer (a waterbearing stratum of permeable rock, sand, or gravel) is artificially replenished.

Avigation Easement. A recorded right to overfly a parcel granted to an airport owner.

BAAQMD. Bay Area Air Quality Management District.

BCDC. San Francisco Bay Conservation & Development Commission.

Base Flood Elevation. The highest elevation, expressed in feet above sea level, of the level of flood waters occurring in the regulatory base flood. The base flood elevation represents the worst flooding experience in a community or an area.

Bay Mud. An estuarine deposit, Bay Mud is an unconsolidated, water-saturated, dark plastic and silty clay rich in organic material. Found generally in land areas below 8 feet above sea level and underlying the waters of San Francisco Bay and small coastal lagoons and estuaries.

Bedrock. The solid rock underlying unconsolidated surface materials.

Bike Lane. A corridor expressly reserved by markings for bicycles, existing on a street or roadway in addition to any lanes for use by motorized vehicles (Class II Bikeway).

Bike Path. A paved route not on a street or roadway, expressly reserved for bicycles. Bike paths may parallel roads but typically are separated from them by landscaping (Class I Bikeway).

Bike Route. A facility shared with motorists and identified only by signs. A bike route may or may not have pavement markings or lane stripes (Class III Bikeway).

BMR. Below Market Rate. BMR housing is subsidized to make it available to households that cannot afford current market price.

Borings. The process of making a hole in the earth and extracting material for analysis of its composition. By generalizing a finding over a wider area, it is possible to determine the relative stability of a site.

Buildout. That level of urban development characterized by full occupancy of all developable sites in accordance with the General Plan; the maximum level of development envisioned by the City's General Plan. Buildout does not assume that each parcel is developed to include all floor area or housing units possible under zoning regulations.

Bulkhead Line. A line along a navigable water offshore from which no fill or structure is permitted.

CAI. California Archaeological Inventory.

Caltrans. California Department of Transportation.

Capital Improvement Program (CIP). The multi-year scheduling of public physical improvements based on studies of fiscal resources available and the choice of specific improvements to be constructed. Alameda's CIP is for a five-year period.

CARB. California Air Resources Board.

Carbon Monoxide (CO). An odorless, colorless gas formed by the incomplete combustion of fuels; roughly 80 percent of Bay Area CO emissions are estimated to be from motor vehicles.

CBE. Citizens for a Better Environment. Author of a report on toxic hot spots in San Francisco Bay, CBE is a statewide public interest organization that promotes effective solutions to urban pollution problems affecting human health and the environment.

CDBG. Federal Community Development Block Grant.

CEQA. California Environmental Quality Act, 1979.

City. The City of Alameda.

Class I Bikeway. See Bike Path.

Class II Bikeway. See Bike Lane.

Class III Bikeway. See Bike Route.

Class I Disposal Site. Sites at which complete protection for the quality of groundwaters, surface waters, public health, and wildlife resources is provided for all time from wastes deposited therein. These sites are designated as capable of accepting for disposal Group 1, 2, and 3 wastes.

Class II Disposal Site. Sites at which protection to groundwaters, surface waters, public health, and wildlife resources is provided from Group 2 and 3 wastes.

Class III Disposal Site. Sites at which protection to water quality is provided from Group 3 wastes by location, construction, and operation which prevent erosion of deposited material.

CLUP. Combined Land Use Plan. The Land Use, Open Space and Circulation elements of the Alameda General Plan, adopted July 3, 1979.

CNDDDB. California Natural Diversity Data Base.

Coast Ranges. A broad area of folded and faulted rocks that constitute the Western edge of the North American Continent. The eastern margin of the San Francisco Bay is formed by the central part of the Coast Ranges.

Community Noise Equivalent Level (CNEL). A 24-hour energy equivalent level derived from a variety of single-noise events, with weighting factors of 5 and 10 dB applied to the evening (7:00 to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) periods, respectively, to allow for the greater sensitivity to noise during those hours. An alternative measure is day-night average sound level (Ldn). The A-weighted average sound level for a given area (measured in decibels) during a 24-hour period with a 10dB weighting applied to nighttime sound levels. The Ldn is approximately numerically equal to the CNEL for most environmental settings.

Conservation. The management of natural resources to prevent waste, destruction, or neglect.

Couplet. A pair of parallel one-way streets operating in opposite directions. In some instances, one street may be two-directional with unbalanced lanes.

Critical Facility. Facilities having a vital role in a potential emergency, the failure of which might prove catastrophic.

Culvert. A drain, ditch or conduit not incorporated in a closed system that carries drainage water under a driveway, roadway, railroad, pedestrian walk or public way. Culverts are often built to channelize streams and as part of flood control systems.

Curb Cut. The opening along the curb line at which point vehicles or other wheeled forms of transportation may enter or leave the roadway. Curb cuts are essential at street corners for wheelchair users.

Cycle Length. The amount of time between the beginning of one green light and the beginning of the next green light.

Decibel (dB). A unit used to express the relative intensity of a sound as it is heard by the human ear. The decibel measuring scale is logarithmic. Zero (0 dB) on the scale is the lowest sound level that a normal ear can detect under very quiet ("laboratory") conditions and is referred to as the "threshold" of human hearing. On the logarithmic scale, 10 decibels are 10 times more intense, 20 decibels are 100 times more intense, and 30 decibels are 1,000 times more intense than 1 decibel. See also Decibel "A-Weighted."

Decibel "A-Weighted" (dBA). The scale for measuring sound in decibels that weights or reduces the effects of low and high frequencies in order to simulate human hearing. See also Decibel.

DEIR. Draft Environmental Impact Report.

Density, Base. The allowable residential density range for a General Plan land use classification, excluding any density bonus.

Density Bonus. An increase in allowable density above base density granted in exchange for provision of affordable or senior housing.

Density, Net. The number of dwelling units per acre of developable residential land designated on the *General Plan Diagram*, exclusive of public and private streets, drainage, power-transmission-line easements, or other public and semipublic uses.

Design Review. The process whereby projects are reviewed for compliance with established design guidelines.

Development Fees. Direct charges or dedications collected on a one-time basis for a service provided or as a condition of approval being granted by the local government. The purpose of the fee or exaction must directly relate to the need created by the development. In addition, its amount must be proportional to the cost of the service or improvement. Fees can be broken down into two major classes: 1) service charges such as permit fees covering the cost of processing development plans, connection or standby fees for installing utilities or application fees for reviewing and considering development proposals; and 2) "impact" fees levied on new development to cover the cost of infrastructure or facilities necessitated by development.

DFG. State of California, Department of Fish and Game.

Dwelling Unit (du). A building or portion of a building containing one or more rooms, designed for or used by one family for living or sleeping purposes, and having a separate bathroom and only one kitchen or kitchenette. See Housing Unit.

EBMUD. East Bay Municipal Utility District.

EBRPD. East Bay Regional Park District.

Ecotone. A transition area between two adjacent ecological communities usually exhibiting competition between organisms common to both; often a rich biological area.

ECRB. Engineering Criteria Review Board.

Effluent. A liquid discharged as waste, such as the outflow from a sewage treatment facility or storm sewer.

EIR (Environmental Impact Report). A report on the effect of a proposed development proposal or other major action which would significantly affect the environment. The report consists of an inventory of existing environmental conditions, projected impacts of development, and mitigation for significant adverse impacts. A general plan EIR is necessarily more general than a site-specific EIR.

Endangered Species, California. A native species or sub-species of a bird, mammal, fish, amphibian, reptile, or plant, which is in serious danger of becoming extinct throughout all or a significant portion of its range, due to one or more factors, including loss in habitat, change in habitat, over-exploitation, predation, competition, or disease. The status is determined by the State Department of Fish and Game together with the State Fish and Game Commission.

Endangered Species, Federal. A species which is in danger of extinction throughout all or a significant portion of its range, other than the species of the Class Insecta determined to constitute a pest whose protection under the provisions of the 1973 Endangered Species Act, as amended, would present an overwhelming and overriding risk to humans. The status is determined by the U.S. Fish and Wildlife Service and the Department of the Interior.

EPA. Environmental Protection Agency.

Epicenter. That point on the Earth's surface which is directly above the focus of an earthquake.

Erosion. The process by which soil and rock are detached and moved by running water, wind, ice, and gravity.

Estuarine environment. Includes marshlands, mudflats, salt production lands, and open water.

Estuary, also known as Oakland Estuary, is a generic and historic term used to describe all those waters west of the Tidal Canal which used to function as a visible estuarine system with marshes and a mixture of fresh water flowing from the streams and creeks of Oakland into the tidal waters of San Francisco Bay.

FAR. Floor Area Ratio. The ratio between gross floor area of structures on a site and gross site area. Thus, a two-story building covering 50 percent of its site would have a FAR of 1.0.

FAR. Federal Aviation Regulations.

Fault. A surface or zone of rock fracture along which there has been displacement, from a few centimeters to a few kilometers in scale.

Federal Candidate Species, Category 1 (Candidate 1). Species for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened.

Federal Candidate Species, Category 2 (Candidate 2). Species for which existing information indicates that these species may warrant listing, but for which substantial biological information to support a proposed rule is lacking.

Federal Flood Insurance. Affordable flood insurance offered by the federal government to property owners whose communities participate in the National Flood Insurance Program. Alameda is a participant.

FEIR. Final Environmental Impact Report.

FEMA. Federal Emergency Management Agency.

500-year flood. A flood which has a 0.2 chance of occurrence in any given year.

Floor Area, Gross. The total horizontal area in square feet of all floors within the exterior walls of a building, but not including the area of unroofed inner courts or shaft enclosures.

Franciscan Melange. A thick zone of small to very large hard rocks embedded in more or less intensely sheared and crushed rock material, formed by an ancient fault which is no longer active.

Franciscan Rocks. The name applied collectively to the crumpled seafloor sediments that form the bulk of the Coast Ranges.

General Plan. A comprehensive, long-term plan mandated by State Planning Law for the physical development of a city and any land outside its boundaries which, in its judgment, bears relation to its planning. The plan shall consist of seven required elements: land use, circulation, open space, conservation, housing, safety, and noise. The plan must include a statement of development policies and a diagram or diagrams illustrating the policies.

Gold Coast. A residential neighborhood outlined roughly by the Lagoon, Lafayette Street, San Antonio Avenue, Central Avenue, and Weber Street.

Greenhouse Effect. The gradual warming of the Earth's atmosphere attributed to the accumulation of gases caused by industrial and agricultural activities. Associated phenomena include the melting of the polar ice caps and rising sea levels.

Group 1 Wastes. Consist of or contain toxic substances and substances which could significantly impair the quality of usable waters. Examples are acids, alkalies, pesticides, and chemical toilet wastes.

Group 2 Wastes. Consist of or contain chemically or biologically decomposable material, which does not include toxic substances nor those capable of significantly impairing the quality of usable waters. Examples are garbage, rubbish, street refuse, dead animals, and agricultural crop residues.

Group 3 Wastes. Consist entirely of nonwater soluble, nondecomposable inert solids. Examples are dirt, rock, concrete, and asphalt.

Habitat. The natural environment of a plant or animal.

Hardscape. Rigid portions of the urban landscape, including the surfaces of streets and sidewalks, structures, and underground utilities.

Hazardous Waste. Waste which requires special handling to avoid illness or injury to persons or damage to property. Includes, but is not limited to, inorganic mineral acids of sulfur, fluorine, chlorine, nitrogen, chromium, phosphorous, selenium and arsenic and their common salts; lead, nickel, and mercury and their inorganic salts or metallo-organic derivatives; coal, tar acids such as phenol and cresols and their salts; and all radioactive materials.

High Occupancy Vehicle Lanes (HOV). Traffic lanes that are permanently or periodically restricted by law to vehicles with two, three, or more occupants.

Household. Person or persons living in one dwelling unit.

Housing Payment. For ownership housing, this is defined as the mortgage payment, property taxes, and insurance and utilities. For rental housing this is defined as rent and utilities.

Housing Unit, Multi Family. A dwelling unit in a structure designed and/or used to house three or more families living independently of each other.

Housing Unit, One Family. A detached dwelling unit designed and intended for occupancy by one family, and containing not more than one kitchen.

Housing Unit, Two Family. A dwelling unit in a structure designed and/or used to house not more than two families living independently of each other, and containing two kitchens.

Impervious Surface. Any material which reduces or prevents absorption of water into land.

Income, Above-Moderate. A household whose income exceeds 120 percent of the county median.

Income, Low. A household whose income does not exceed 80 percent of the county median.

Income, Median. The county-wide median income for a four-person household, as defined by the United States Department of Housing and Urban Development and the California Department of Housing and Community Development (March 1989).

Income, Moderate. A household whose income is between 81 and 120 percent of the median family income for the county.

Income, Very-Low. A household whose income does not exceed 50 percent of the median family income for the county.

Infill. The development of new housing or other buildings on scattered vacant lots in a built-up area or on new building parcels created by permitted lot splits.

Inversion. Temperature inversions limit the amount of vertical mixing of air and thus trap pollutants in the lower atmosphere where people breathe. Inversions are characterized by a layer of warmer air above a layer of cooler air, a reversal of the normal decline in temperature with increasing altitude.

Jobs-Housing Balance. A ratio used to describe the adequacy of the housing supply within a defined area to meet the needs of persons working within the same area. Jobs-housing balance as used in the General Plan is the ratio of jobs to employed residents within Alameda.

LP Gas. Liquid Petroleum Gas.

Landslide. The downslope movement of soil and rock.

Leachate. A solution obtained by leaching; e.g., water that has percolated through soil containing soluble substances and that contains certain amounts of substances in solution.

Live/Work. A living unit designed to include work space for artists and artisans, including individuals practicing one of the fine arts or performing arts, or skilled in an applied art or craft.

Liquefaction. A sudden large decrease in the shearing resistance of a cohesionless soil, caused by a collapse of the structure by shock or strain, and associated with a sudden but temporary increase of the pore fluid pressure.

LOS. Traffic Level of Service calculated on the basis of a volume-to-capacity ratio of an intersection. See General Plan Table 4-1.

Low-Density Residential. 4.5 to 8.7 units per net acre.

Managed Wetlands. Marshes diked off from the Bay and managed as habitat.

MAP. Million annual passengers.

Mean Lower Low Water (MLLW). Mean lower low water. The average height of the lower of two unequal daily low tides over 19 years.

Measure A. A 1973 amendment of the Alameda City Charter prohibiting construction of multiple-dwelling units except replacement of low-cost housing units by the Alameda Housing Authority.

Medium-Density Residential. 8.8 to 21.8 units per net acre, under certain circumstances, up to 26.1 units per net acre. See General Plan Section 2.2 definitions.

Merritt Sand. A loose, well-sorted, fine- to medium-grained sand with subordinate silt. This sand generally overlies peaty mud and is exposed at the northeast end of San Francisco Bay near Southwest Oakland and in Alameda.

Midden. Refuse heap. In the San Francisco Bay Area midden is composed primarily of shells and shell fragments piled in great mounds by early Native American inhabitants.

Mitigation. A specific action taken to reduce environmental impacts. Mitigation measures are required as a component of an environmental impact report (EIR) if significant impacts are identified.

MOIA. Metropolitan Oakland International Airport. Also called Oakland Airport.

MTC. Metropolitan Transportation Commission.

Mt. Trashmore. Also known as Doolittle Landfill, this dump site was active between 1953 and 1981.

NAS. Naval Air Station, Alameda.

Net Acre. The area of a lot exclusive of land used or to be used for public or private streets or other rights of way.

Nitrogen Dioxide (NO₂). A reddish brown gas that is a byproduct of the combustion process and is a key to the ozone production process.

Noise Contour(s). Isolines (a line on a map or chart along which there is a constant value) representing noise, measured in decibels. See also Community Noise Equivalent Levels.

Non-point Source. A pollutant source introduced from dispersed points and lacking a single, identifiable origin. Examples include automobile emissions or urban run-off.

NPSC Program. Non-point source control program.

100-year Flood. That flood event which has a 1-percent chance of occurrence in any one year.

Open Space. Any parcel or area of land or water which is essentially unimproved and devoted to an open-space use as defined in the General Plan or designated on a local, regional, or state open-space plan as one of the four types of open space defined in State Planning Law.

Oxidant. The production of photochemical reactions in the atmosphere between reactive organic gases and oxides of nitrogen.

Ozone. An oxidant, O₃, that makes up the largest single portion of smog.

Pacific Flyway. A complex branching of routes and subroutes in the sky followed by millions of waterfowl as they migrate from their breeding grounds in Alaska, Canada, the Yukon, Siberia, and the northern prairie states to their winter feeding grounds in California and points south. Along with the Central, Mississippi, and Atlantic Flyways, it is considered to be one of the four great migration routes crossing the United States.

Parcel. A lot or tract of land.

Particulate Matter. Minute, separate airborne solid or liquid particles including smoke, dust, aerosols, metallic oxides, and pollen.

PCB. Polychlorinated biphenyl, a highly toxic, petroleum-based compound used in the past as an insulating and lubricating product.

Peak Hour Traffic. The number of vehicles passing over a designated section of a street during the busiest one-hour period during a 24-hour period.

Pierhead Line. A line beyond which no structure may extend into tidal waters.

Point Source. A source of pollutants which may be traced to a point of emissions.

Population Holding Capacity. The population that would result if all vacant land designated for residential use within the City were built at the average density for the designated General Plan density category and the average number of household residents per household in the City were 2.26. (ABAG *Projections '87*, 2005 average household size).

Pore Pressure. Seismic shaking raises the pore water pressure of soils repeatedly so that sand grains are momentarily forced apart, creating the opportunity for liquefaction or other secondary seismic hazards. Bay Mud and Merritt Sand have high levels of pore water pressure which, when shaken by seismic activity or ground water pumping, will tend to liquefy.

Quadrangle. Four-sided area, bounded by parallels of latitude and meridians of longitude, used as an area unit in mapping.

RASP. Regional Airport System Plan.

Reclaimed Wastewater. Treated sewage or excess irrigation water with chlorine or other chemical disinfectants added.

Response Time. The amount of time for an emergency services response, measured from the time of the distress call until arrival on the scene.

Retention Area. A pond, pool, lagoon, or basin used for the storage of water runoff.

Right-of-Way. A strip of land acquired by reservation, dedication, forced dedication, prescription or condemnation, and intended to be occupied or actually occupied by a road, crosswalk, railroad, electric transmission lines, oil or gas pipeline, water line, sanitary storm sewer or other similar use.

Riparian Habitat. Land and plants bordering a water course.

Rip-rap. Slopes around the perimeter of land areas subject to wind and wave erosion are sometimes protected by a rock and concrete edge (rip-rap) that prevents large-scale erosion.

RWQCB. Regional Water Quality Control Board.

Sand Boils. Sand and water ejected to the surface as a result of liquefaction at shallow depth; a conical or ridge-shaped sediment deposit is evidence of this occurrence.

Seiche. Oscillation of the surface of an enclosed body of water owing to earthquake shaking.

Sensitive Receptors. Members of the population who are most sensitive to air quality include children, the elderly, the acutely ill, and the chronically ill. The term "sensitive receptors" can also refer to the land use categories where these people live or spend a significant amount of time. Such areas include residences, schools, playgrounds, child care centers, hospitals, retirement homes, and convalescent homes.

Siltation. The process of silt deposition. Silt is a loose sedimentary material composed of finely divided particles of soil or rock, often carried in cloudy suspension in water.

Solid Waste. Unwanted or discarded material, including garbage, with insufficient liquid content to be free flowing.

SOV. Single-occupant vehicle.

Specific Plan. A detailed plan that includes the text and maps or diagrams generally specifying the following for a portion of the area covered by the General Plan:

1. Land use;
2. Distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities;
3. Standards and criteria by which development will proceed; and
4. A program of implementation measures including regulations, programs, public-works projects, and financing measures.

Street, Major. A street carrying the traffic of local and collector streets to and from other streets and expressways or freeways, with controlled intersections and direct access to some, but not all properties.

Street, Minor. A street that provides the principal means of direct access to properties and is designed to discourage through traffic.

Subdivision. The division of a lot, tract, or parcel of land into two or more lots, tracts, parcels, or other divisions of land for sale, development, or lease.

Subsidence. The gradual sinking of land as a result of natural or man-made causes.

Substrate; Substratum. The material of which something is made and from which it derives its special qualities.

The "Project". In the EIR, the "Project" is "buildout in accord with Alameda General Plan."

The "No Project" Alternative. In the EIR, the "No Project" alternative evaluates existing conditions in the City.

Threatened Species, California. A native species or sub-species of a bird, mammal, fish, amphibian, reptile, or plant that, although not currently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts required by Chapter 1.5 of the State Department of Fish and Game Code.

Threatened Species, Federal. A species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Toxic Hot Spot. A place where toxic chemicals have reached threatening levels in the sediments, shellfish, ducks, and waters of the Bay.

Trip. A one-way journey that proceeds from one origin to one destination.

Trip, Person. A trip made by an individual.

Trip-Generation Rate. The number of vehicle trips per acre, per 1,000 square feet of floor area, per housing unit or other unit of measure during a stated period. Measured trip-generation rates are used to project the impact of development on the traffic circulation system and as a basis for regulating the intensity of development.

TSM. Transportation Systems Management measures to reduce the number of single-occupant vehicle trips during peak hours.

Tsunami. Large wave action induced by seismic shaking.

Turning Basin. An area with adequate space for vessels to turn 180 degrees.

USGS. United States Geological Survey.

USGS Quadrangles. A U.S. Geological Survey-produced map showing natural and cultural features for an area extending across 15 minutes of longitude and 7.5 minutes of latitude.

Vehicle Trip. A trip made by a vehicle (may equal one or more person-trips).

Waste Stream. All solid, semisolid and liquid wastes including garbage, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes.

Waterway. A natural waterway can support its own environment of vegetation, fowl, fish, and reptiles, and appears natural.

Wetlands. Includes the environments of subtidal mudflats, mudflats, tidal salt marsh, periodically inundated or brackish marsh, diked marshland, associated upland, and freshwater marsh.

Xeric. Vegetation requiring only a small amount of moisture.

Zoning District. A specifically delineated area on a zoning map within which regulations and requirements uniformly govern the use, placement, spacing, and size of buildings, open spaces, and other facilities.

Zoning Ordinance. The City ordinance which divides Alameda into districts and establishes regulations governing the use, placement, spacing, and size of buildings, open spaces, and other facilities.

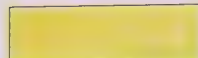
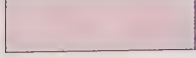


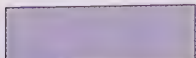

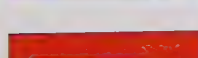

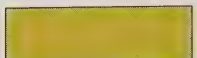




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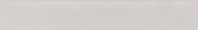


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37	Marina Village Shopping Center	Marina Village Development
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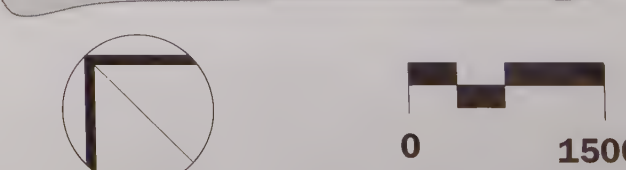
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|---|---|--|
|  Low-Density Residential |  Office |  Commercial Recreation |
|  Medium-Density Residential |  Business Park |  Parks & Public Open Space |
|  Neighborhood Business |  Specified Mixed Use |  Open Space/Habitat |
|  Community Commercial |  General Industry |  Public/Institutional/School (grades) |
| | |  Federal Facilities |

-  Minor Street
-  Major Street
-  Freeway
-  Proposed Roadway
-  Railroad
-  Ferry Terminal



City of Alameda
General Plan Diagram
 February 1991

City of Alameda General Plan Summary

These sections are the Guiding Policies that, together with the General Plan Diagram, summarize the Alameda General Plan. Reference to the full plan is necessary to determine whether a proposed private or public project is consistent with the General Plan. The Alameda General Plan was adopted by the City Council, City of Alameda, February 5, 1991.

Land Use Element

Guiding Policies: Residential Areas

Maintain and enhance the residential environment of Alameda's neighborhoods.

To the extent feasible, conserve housing located in areas that have been zoned for commercial or industrial use.

Where a suitable residential environment can be created, give priority to housing on land to be developed or redeveloped in order to meet the quantified objectives of the Housing Element.

Limit residential development to one family and two family dwellings, in accord with the provisions of Measure A. Up to 325 low cost units may be built in Alameda as multi family housing as replacement housing for the low cost units lost when the Buena Vista Apartments were converted to market-rate housing in 1988. Some or all of these replacement units may be located at one or more of the mixed-use sites, or in any area of the City where residential units are permitted.

Expand housing opportunities for households in all income groups.

Protect and restore Alameda's outstanding residential architecture of all periods and styles.

Minimize through-traffic on minor residential streets.

Control nonresidential development on sites adjoining residential neighborhoods to minimize nuisances.



Guiding Policies: Retail Business and Services

Provide enough retail business and services space to enable Alameda to realize its full retail sales potential.

Revitalize Alameda's historic downtown shopping districts on Park Street and Webster Street while maintaining their small-city scale.

Do not permit offices to occupy ground floor space suitable for retail within the Main Street business districts and the Neighborhood business districts.

Encourage continuing improvements to the South Shore Center and other shopping centers.

Maintain full-service community shopping centers serving all sectors of the City.

Maintain neighborhood business districts for small stores that attract mainly pedestrian traffic and can be acceptable neighbors for nearby residents.

Encourage retention and addition of housing in the Park Street, Webster Street, and Neighborhood Business Districts.

Guiding Policies: Specified Mixed Use Areas

Island Auto Movie Area: Implement a development program that includes housing and may include offices. Require 150 to 200 two family residential units (15 to 20 units per net acre) and permit up to 30,000 square feet of office space.

Mariner Square: Preserve the existing mix of water-related uses and add onshore live-work space. To avoid displacing water-related uses, office space additions are limited to 5,000 square feet.

Ballena Isle: Implement a development program consisting of a hotel of up to four stories and 220 rooms plus conference rooms, with improvements and maintenance of the 6.5-acre shoreline parcel for public open space as a condition of development approval.

Grand to Willow Street (Northern Waterfront): Continue efforts to minimize industrial-residential conflicts on the south side of Clement Avenue where current zoning matches current use at most locations. Live-work space for artists and artisans would be an appropriate use in many cases. To ensure maintenance of a working waterfront and to avoid employment densities that would create heavy traffic, office and retail space is to be limited to approximately its current share of total floor area. The intent is to maintain an environment suited to the types of businesses now located in the area — both those that are related to

the waterfront and those that are not.

Willow Street to Oak Street (Northern Waterfront): Provide for redevelopment of existing industrial sites for 250 to 350 two family residential units, treating the area north of Clement Avenue as an extension of the residential neighborhood to the south.

Willow Street to Oak Street (Northern Waterfront): Create a continuous 300-foot-wide "marina green" park along the Estuary.

Guiding Policies: Offices

Provide ample space for local-serving office by encouraging construction of offices on second and third floors over retail space.

Do not permit offices in residential areas designated on the General Plan Diagram.

Guiding Policies: Business Parks & Industrial Areas

Support development of Harbor Bay Business Park consistent with existing approvals and agreements.

Maintain existing and potential bulk cargo seaport capacity at Encinal Terminals and Alameda Gateway consistent with the Seaport Plan prepared by the Metropolitan Transportation Commission (MTC) and the Bay Conservation and Development Commission (BCDC).

Support continued operation of manufacturing and distribution industries using seaport and rail facilities.

Continue working to eliminate residential-industrial conflicts based on the assumption that the boundaries between the uses on the General Plan Diagram will endure 20 years or longer.

Maintain maritime character where the Northern Waterfront is to remain in industrial use.

Guiding Policies: Federal Government Facilities

Support the continued operation of Alameda Naval Air Station (NAS) at its 1990 level.

Maintain close communication with the United States Coast Guard regarding future planning and development of facilities on Coast-Guard Island.

Guiding Policies: City-owned Land

Establish long-range management policies for City-owned real property based on comparative evaluation of potential for public use and enjoyment, public- or joint-venture enterprise development, or lease for development.

Investigate and pursue potential opportunities to acquire underused State or Federal property in Alameda.

Stop the trend toward private use of public property.

City Design Element

Guiding Policy: Entrances

Alameda's entrances should create a sense of civic pride.

Guiding Policies: Edges, Vistas, Focal Points

Maximize views of water and access to shorelines.

Urge implementation of proposals of the Alameda NAS Master Plan that would improve the appearance of this western boundary of Alameda.

Maintain and extend Alameda's outstanding street tree system using the adopted Street Tree Management Plan as a guide in the decision making process.



Guiding Policies: Civic Center

Using City Hall as the centerpiece, develop the surrounding area as an identifiable civic center that will enhance civic pride in Alameda.

Rely on design character and provision of coordinated open spaces rather than narrow restrictions on use to create a sense of civic center. In addition to public and institutional facilities, permitted uses are to include pocket parks, offices, retail stores, residential units, and parking.

Transportation Element

Guiding Policies: Street System

Designate a system of major streets and minor streets as a basis for managing traffic to minimize intrusion in residential neighborhoods.

Encourage traffic within, to, and through Alameda to use the system of major streets by providing traffic control measures to ensure smooth flow.

Do not increase through-traffic capacity on the Main Island.

Oppose construction of any auto-oriented bridge, tunnel, or tube crossing of San Francisco Bay (southern crossing) that would connect with Alameda or would be above water level within Alameda.

Minimize vehicle trips to and from Harbor Bay Business Park that must cross the Main Island by providing alternative connections to I-880 Freeway and by applying Transportation Systems Management techniques.

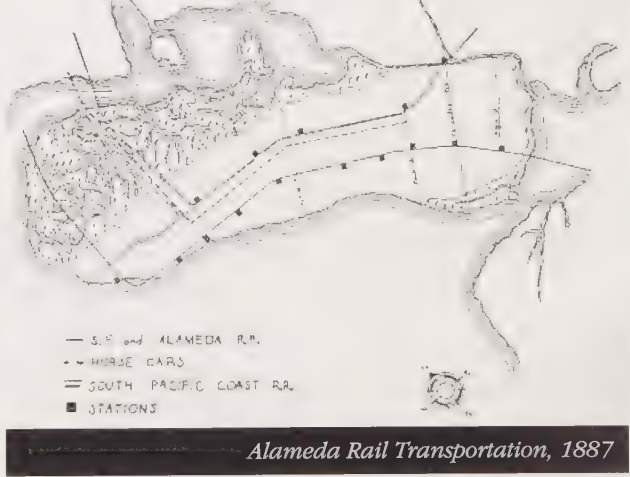
Support construction of a Cross-Airport Roadway if net benefit to Alameda can be demonstrated. The Roadway should begin at a junction with Harbor Bay Parkway south of Maitland Drive and end at I-880 Freeway in the vicinity of 98th Avenue.

Support construction of a crossing under San Leandro Bay connecting Harbor Bay Parkway and the 66th Avenue interchange with I-880 Freeway.

Plan for a new street connection between Main Street and Mariner Square Loop through the Naval Supply Center in the vicinity of B Avenue.

Guiding Policy: Transportation Systems Management

Recognizing that buildout of the City will result in unacceptable congestion unless 1990 travel habits are altered, Alameda is committed to de-emphasizing use of the single-occupant vehicle during peak periods.



Guiding Policies: Transit

Support AC Transit's current (1990) route restructuring plan for local and express bus service.

Encourage AC Transit to maintain a dialogue with Alameda to ensure continued high levels of coverage and transit frequency.

Support AC Transit's preliminary concept of a light rail line connecting downtown Oakland, BART stations and Oakland Airport with the route passing through Alameda.

Develop transit-oriented streets where feasible.

Encourage AC Transit to consider Transit Centers to facilitate transfers at the following locations: South Shore Center, vicinity of Blanding and Broadway, along Webster Street, and at the Alameda Gateway and Harbor Bay Isle ferry terminals.

Support ferry service as an effective means of reducing demand for greater road capacity, offering commute alternatives, and minimizing pollution.

Work with MTC to secure and maintain needed subsidies for ferry service from Federal and State highway or transit funds.

Work toward integrating a Citywide demand responsive shuttle service, which incorporates para-transit, BART, AC Transit, Dial-A-Ride, and shopper needs.

Seek both technologies and service providers capable of expanding transit use in Alameda.

Guiding Policies: Pedestrian Routes

Ensure that automobile circulation improvements do not degrade the pedestrian environment.

Provide space for pedestrian, wheelchair, and bicycle crossing on both sides, if feasible, as part of any modification to bridges providing access to and within the City.

Identify potential conflicts between bicyclists and pedestrians and develop projects to minimize such conflicts (e.g. Bay Farm Island Bridge and Shoreline paths).

Guiding Policies: Bikeways

Provide a system of bike paths, bike lanes, and bike routes that will

encourage both commute and recreational cycling.

Maintain communication between bike riders and City staff responsible for bikeways design and budgeting to ensure effective use of available funds.

Encourage transit systems to provide bike transport for commuter and recreational cyclists.

Consider providing public amenities for bicycle riders such as staging areas with bicycle lockers at transit connections.

Guiding Policies: Movement of Goods

Support the MTC/BCDC Seaport Plan proposals to retain Port Priority Use capability at Encinal Terminals and Alameda Gateway.

Support continued rail service by the Alameda Belt Line.

Maintain a system of truck routes that enables efficient deliveries with minimum disturbance of residential neighborhoods.

Open Space & Conservation Element

Guiding Policies: Open Space for the Preservation of Natural Resources

Preserve and enhance all wetlands and water-related habitat.

Protect Open Space-Habitat areas, including sensitive submerged tidelands areas (mudflats) and eelgrass beds, from intrusions by motorized recreational craft, including jet skis and hovercraft.

Continue to prohibit filling of water-related habitat except in those limited cases in which a strong public need clearly outweighs the habitat preservation need, and where approval is granted by the appropriate agencies.

Preserve buffers between wetlands and urban uses.

Continue to preserve and maintain all lagoons as habitat as well as visual and compatible-use recreational resources.

Urge the NAS to promptly clean up toxic materials found on-site.

Support BCDC in their efforts to implement a regional dredging plan.

Continue to support the East Bay Municipal Utility District (EBMUD) in its efforts to promote and implement water conservation measures.

Encourage the use of drought-resistant landscaping.

Use the City of Alameda Street Tree Management Plan as the guiding reference when considering action which would affect the trees contained in the urban forest.

Guiding Policies: Open Space for the Managed Production of Resources

Protect and preserve Bay waters and vegetation as nurseries and spawning grounds for fish and other aquatic species, both as a part of habitat preservation and to encourage continued use of the Bay for commercial fishing production.

Explore interest in public and privately owned sites available for community gardens.

Guiding Policies: Climate and Air Quality

Strive to meet all Federal and State standards for ambient air quality.

Support continued monitoring efforts by the Bay Area Air Quality Management District.

Guiding Policy: Historic and Archaeologic Resources

Protect historic sites and archaeologic resources for their aesthetic, scientific, educational, and cultural values.

Parks & Recreation, Shoreline Access, Schools & Cultural Facilities Element

Guiding Policies: Parks and Recreation

Expand Alameda's park system.

Continue cooperation with the Alameda Unified School District (AUSD) to achieve optimum joint use of limited school open space and park space.

Pursue park and open space grant opportunities and cooperative agreements with local, regional, and state agencies for expansion of the City's park and open space system.

Promote the development and retention of private open space to compensate for the shortage of public open space.

Guiding Policies: Shoreline Access and Development

Maximize visual and physical access to the shoreline and to open water.

Regulate development on City-owned shoreline property to maximize public use opportunities.

Ensure marina operating standards that prevent degradation of water quality.

Through design review of shoreline property, give consideration to views from the water.



Guiding Policies: Schools

Support and cooperate with the AUSD in its efforts that extend beyond classroom education, including:

- Making open space and recreation facilities available for community use;
- Offering and providing space for child care; and
- Contributing to the visual quality of Alameda and attitude of students toward their environment through the architecture, landscape treatment, and maintenance of the district's schools.

Support the AUSD efforts to obtain school impact fees needed to maintain adequate educational facilities to serve enrollment generated by new development in the City.

Guiding Policies: Cultural Facilities

Design the new Main Library as an important element of a future Civic Center.

Encourage and support private groups in their efforts to create an arts center for Alameda. Encourage the use of an existing architecturally distinguished building as an arts center.

Encourage and support the Alameda Historical Museum in its efforts to secure a permanent, suitable facility.

Airport Environs Element

Guiding Policies: Airport Impact Areas

Regulate development in Alameda to minimize hazards in safety zones designated by the Alameda County Airport Land Use Commission and Accident Potential Zones designated by the U.S. Navy.

Do not approve incompatible development in noise/safety sensitive areas.

Seek ways to ensure provision of effective sound mitigation for all housing units in noise impact areas.

Encourage Metropolitan Oakland International Airport (MOIA) to limit night use of North Field to Stage 3 aircraft.

Ensure that purchasers of property currently or potentially subject to noise levels exceeding 65 decibels Community Noise Equivalent Level are aware of such conditions, of City policies regarding mitigation, and of limitations to the City's ability to abate nuisances when such properties are subject to an aviation easement.

Guiding Policies: Airport Operations and Development

Seek adherence by airport operators to operational, development and management policies that will minimize noise nuisance and safety concern for Alameda.

Urge MTC to address the limits of expansion of MOIA and San Francisco International Airport other than operations permitted by the 1976 Settlement Agreement, and the need for additional commercial airport(s) at less congested locations in the 1990 revision of the Regional Airport Systems Plan (RASP). Insist that the RASP evaluate the merits of expanding MOIA vs. adding capacity at alternative locations serving the Bay Area.

Establish effective regular communication among the City of Alameda, Port of Oakland, and the Federal Aviation Administration regarding noise control at MOIA.

If an additional runway is warranted at MOIA, a runway outboard of Runway 11-29 is acceptable in principle to Alameda. No commitment to capacity expansion should be made until the 1990 revision of the RASP is complete and is adopted by MTC/Association of Bay Area Governments (ABAG).

Health & Safety Element

Guiding Policies: Seismic, Geologic, and Soils Hazards

A soils and geologic report will be submitted if required by the Director of Public Works prior to the issue of all grading and building permits and submission of final maps, in accordance with the Subdivision Ordinance, to evaluate the potential for lateral spreading, liquefaction, differential settlement, and other types of ground failures.

Require design of new buildings to resist the lateral effects and other

potential forces of a large earthquake on any of the nearby faults, as required by the Uniform Building Code.

Require building design to incorporate recommendations contained in the soils and geologic report.

Require all structures of three or more stories to be supported on pile foundations that penetrate Bay Mud deposits to firm, non-compressible materials, unless geotechnical findings indicate a more appropriate design.

Design underground utilities to minimize the effect of differential ground displacements.

Continue to provide for the identification and evaluation of existing structural hazards, and abate those hazards to acceptable levels of risk.

Guiding Policies: Fire Hazards

Maintain and expand the City's fire prevention and fire-fighting capability.

Maintain the current level of emergency medical service.

Guiding Policies: Flooding

Adopt the final version of the June 1990 Preliminary Flood Insurance Rate Maps produced by the Federal Emergency Management Agency for Alameda.

Ensure that structures proposed for sites located on flood plains subject to the 100-year flood are provided adequate protection from floods.

Monitor Environmental Protection Agency reports on sea level rise in order to anticipate impacts if sea level rise accelerates; coordinate with BCDC to design an appropriate response.

Support national and international efforts to protect the Earth's ozone layer, including policy to minimize or prevent the release of chlorofluorocarbons and similar gases.

Support a multi-use concept of waterways, including, where appropriate, uses for flood control, open space, nature study, habitat, pedestrian circulation, and outdoor sports and recreation.

Guiding Policies: Hazardous Materials and Waste Management

Continue to identify and assess the risks associated with various hazardous materials transported in Alameda.

Clarify responsibilities for resolving incidents of hazardous materials release.

Apply the Emergency Operations Plan, if necessary, in response to a hazardous materials release disaster.

Continue to support the resource recovery measures specified in the Alameda County Solid Waste Management Plan, July 1987.

Continue to support implementation of the Alameda County Hazardous Waste Management Plan.

Guiding Policy: Magnetic Fields

Support research on the health effects of magnetic fields generated by power transmission lines and other sources, and take appropriate action, if warranted, to reduce hazardous exposure.

Guiding Policy: Emergency Management

Adopt the recommendations and standards to be established in the City of Alameda's Emergency Operations Plan as the guide for disaster planning in Alameda.



Guiding Policies: Noise

Minimize vehicular and stationary noise sources, and noise emanating from temporary activities.

Require site and building design to achieve noise compatibility to the extent feasible.

Recognize that residential, school, hospital, church, or public library properties in commercial areas and commercial development in industrial areas will be subject to noise levels associated with noisier permitted uses.

Maintain efforts to mitigate impacts of aircraft noise while pursuing actions to reduce aircraft noise or avoid noise increases.

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During 1989-90 the City has received general noise complaints (unrelated to aircraft) at a rate of one a month. Business/industrial operations, such as small machinery and night truck deliveries, accounted for most of the nuisances. The 1976 Noise Element noted shipping, shipyard, and other major industrial noise sources, some of them in Oakland, as problems. Several have ceased operation, and none was the subject of recent complaints to the City of Alameda.

Chapter 5 of the Municipal Code, the Community Noise Ordinance, 2177 N.S. (1984) establishes exterior noise standards, requires submission of noise reduction plans for noncomplying sources, and requires implementation of noise-reducing actions determined by Planning Board to be cost effective. Daytime noise associated with construction or with maintenance of residential property is exempt.

Guiding Policies: Noise

- 8.7.a Minimize vehicular and stationary noise sources, and noise emanating from temporary activities.
- 8.7.b Require site and building design to achieve noise compatibility to the extent feasible.
- 8.7.c Recognize that residential, school, hospital, church, or public library properties in commercial areas and commercial development in industrial areas will be subject to noise levels associated with noisier permitted uses.

Chapter 5 of the Municipal Code, Community Noise, sets noise level standards for receiving land uses and requires noise sources to submit a noise reduction plan where the standards are violated.

- 8.7.d Maintain efforts to mitigate impacts of aircraft noise while pursuing actions to reduce aircraft noise or avoid noise increases.

Section 7, Airport Environs Element, includes policies relating to Metropolitan Oakland International Airport (MOIA) expansion, operating policies, and aircraft noise emissions.

Implementing Policies: Noise

- 8.7.e Require acoustical analysis for new or replacement dwellings, hotels, motels, and schools within the projected 60 dB contour. One family dwellings not constructed as part of a subdivision requiring a final map require acoustical analysis only within the projected 65 dB contour.

See Title X, Buildings, Chapter 10, Noise Insulation Standards, of the Alameda Municipal Code for additional detail.

- 8.7.f Require new or replacement dwellings, hotels, motels, and schools within the noise impact areas described in Policy 8.7.e, above, to limit intruding noise to 45 dB CNEL in all habitable rooms. In new dwellings subject to a noise easement, noise is not to exceed 40 dB CNEL in habitable rooms. If this requirement is met by inoperable or closed windows, a mechanical ventilation system meeting Uniform Building Code requirements must be provided.

An average house with no special noise control provisions reduces noise by 15 to 20 dBA with the windows partially open. Sealed windows, weatherstripping, and solid core doors can add 15 dBA reduction. Therefore, 45 dB interior CNEL can be achieved at up to 75 dB exterior CNEL. However, the single events, such as aircraft flyovers, will require greater reductions at some locations to comply with Policy 8.7.f.

- 8.7.g Minimize the impact of aircraft, railroad, and truck noise by requiring that noise levels caused by single events be controlled to 50 dB in bedrooms and 55 dB in living areas within the 60 dB contour.

- 8.7.h In making a determination of impact under the California Environmental Quality Act (CEQA), consider the following impacts to be "significant":

- o An increase in noise exposure of 4 or more dB if the resulting noise level would exceed that described as normally acceptable for the affected land use, as indicated in Table 8-1.
- o Any increase of 6 dB or more, due to the potential for adverse community response.

- 8.7.i Continue to enforce the Community Noise Ordinance.
- 8.7.j Enforce compliance with noise emissions standards for all types of automotive vehicles established by the California Vehicle Code and by Federal regulations.
- 8.7.k Urge AC Transit to use small buses for routes on minor streets as a noise-reduction measure.
- 8.7.l Maintain day and nighttime truck routes that minimize the number of residents exposed to truck noise.
- 8.7.m With the cooperation of the U.S. Coast Guard and the City of Oakland, enforce California noise emission standards for engine-driven vessels.
- 8.7.n Enlist the cooperation of the Alameda Beltline Railroad operators to attain the following objectives:
- o Compliance with Federal standards for rolling stock.
 - o Maintenance of roadbed, rail joints, switches, etc., to avoid excessive wheel-to-rail-to-roadbed noises and vibrations.
 - o Minimal use of acoustical signals that can be heard over an unnecessarily large area.

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City of Alameda

General Plan

Glossary

